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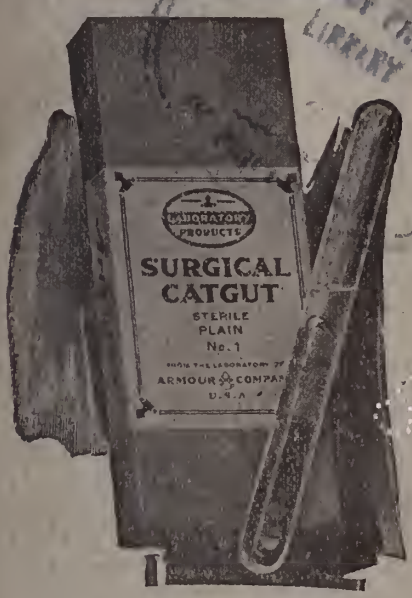

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C. R. ENSLOW, J. E. RADER, } Assistant Editors
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GASTROJEJUNOSTOMY IN ULCERATIVE PERFORATION OF THE DUODENUM.

By Willian W. Golden, M. D., F. A. C. S.

Elkins, West Va.

Please note the title of this very brief paper. I shall not talk about ulcer of the duodenum, nor about gastrojejunostomy in the treatment of ulcer of the duodenum. I merely wish to give you my experience with cases of ulcerative perforation of the duodenum in which gastrojejunostomy was not done, and one case in which it was done.

The few cases of perforation of the duodenum which were brought under my care were all cases in which the ulcers had existed for a long while, and the perforation was in no case less than several days old. As a consequence, I had to deal with more or less extensive induration of the intestinal wall at the site of the perforation. This made effective closure of the opening quite difficult on account of the impossibility to make a complete inversion of the edges by purse-string or any other form of suture. The tendency for the sutures to cut through seemed also very marked. To excise the edges would have helped much to insure effective closure, but this meant a dangerous narrowing of the lumen. I managed to close the perforation and relied upon re-enforcement with omental and peritoneal patches. In each of two cases thus treated the perforation reopened within a few days with uncontrollable leakage from the duodenum and death. The patches did not adhere uniformly, or at all, on account of the altered condition of the intestinal serosa, and the intestinal sutures cut through. In each of these cases I felt that the addition of a gastrojejunostomy was highly desirable but did not do it, because of the extensive peritonitis present, believing that it would be useless and even harmful to attempt to do plastic work in the midst of such active infection. In a case which recently presented itself, however, I gathered courage and after closing the perforation as in previous cases, I per-

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formed the usual posterior gastrojejunostomy, following the C. H. Mayo technique and the patient made rather a rapid recovery. Some of the details of the case are as follows: C. T., age 36, carpenter, gave a history of "stomach trouble" extending over a year. A week before admission to the Davis Memorial Hospital he was seized with severe pain in the upper abdomen which passed off in a few hours, leaving a mere soreness behind. This varied in intensity, but persisted. He did not keep to his bed all the time, except during the 24 hours preceding his admission to the hospital when the pain became severe and general over the abdomen. Th omentum was found adherent to the duodenum, gall-bladder and colon in such a way as to form a large enclosure within which there were pus and free leakage from the duodenum. There was no free pus in the greater periteoneal cavity, but its peritoneum both visceral and parietal was deeply injected as far as it could be inspected. It was the absence of free pus which emboldened me to attempt the performance of gastrojejunostomy. When, as the first step of the operation, I opened the transverse mesocolon, considerable pus poured out from the lesser peritoneal cavity, which evidently had become infected by way of Winslow's foramen. This caused me to hesitate, but only for a moment. At the completion of the anastomosis I left the rent in the mesocolon partially open and placed a drain there, led to the surface through a stab wound. Of course, the subhepatic region was also drained. In five weeks the man resumed his occupation.

PAROXYSMAL TACHYCARDIA

Read before the Raleigh County Medical Society. May, 1918.

By E. S. Dupuy, M. D.
Beckley, W. Va.

The following very interesting and extraordinary case come under my observation here in Beckley in 1917. I will give you a brief history of it.

Mrs. "I. R." age forty-nine years, was married at the age of twenty-one years, was a widow at the age of thirty-one years and was married again at the age of thirty-eight years. She had had four children and three miscarriages, no cause assignable as to the miscarriages except one, when she had an attack with her heart, which she thought produced it. She had whooping cough, chicken-pox, measles, pneumonia, child bed fever, pleurisy four times; was treated for tuberculosis by Dr. Cummings of Hinton; had had rheumatism. She noticed when a child that her heart would palpitate if she would run up stairs; has had the attacks for thirty years, much worse the past ten years. She may have two or three spells a week for one month, then will be free from them for two or three months. Doctor Wallace of Mill Point, West Virginia, was the first doctor to see her. Sometimes she has no doctor. She will take a dose of camphor, lie down and the attack will be over in thirty minutes.

She lived at Blue Jay, West Virginia, for seven years, where Doctor Cunningham treated her, the first attack she had there the doctor found her pulse 160 per minute. In other attacks it only ran up to 120 and 140 per minute. I only saw her in one attack; was called

at 4:00 p. m., and found her pulse 140 per minute. At 10:00 p. m. it was the same; at 1:00 a. m. the same; at 10:00 a. m. next day, the same; at 4:00 p. m. same day, normal. I made a thorough examination of the heart with my phonendoscope at each visit, and found it perfectly normal.

You will note that the attack I saw her in lasted twenty-four hours, but as she stated, all were not that severe, some lasting only thirty minutes.

Cases have been reported where the pulse ran up to 200 per minute. The cause of this remarkable affection is not well known. On authority attributes the attacks to acute dilation of the heart; others think the trouble is in the nervous mechanism of the heart, there being a discharging lesion affecting the centres of the accelerator nerves. There appears to be a shortening of the diastole of the heart, and during the systole so little blood is expelled that the average amount in the minute is not increased and this causes the acceleration of the pulse, rapid action of the heart may be perfectly normal. There are individuals whose normal heart action is at 100 or even more per minute. Emotional causes, violent exercise, and fevers cause a rapid pulse. Fright may produce a rapid pulse for days or weeks. Cases are not uncoTmon at the meno-pause Rapid pulse in women may be due to reflex irritation, from ovarian or uterine disease.

The treatment is not verysuccessful; at least, nothing I did for my patient seemed to do any good. There is a case reported which ice-water or strong coffee would relieve. A hypodermic injection of morphine may relieve the attack; also, an ice bag over the heart, nerve sedatives such as bromide, camphor, monobromate, hyoscine, valerian, and so forth, may be tried. Absolute rest in bed is, of course, very necessary, the room should be dark, and no visitors allowed. The diet should be light and non-stimulating. The patient should be assured that there is no danger; at least, this will apply to most cases. Death has occurred in some instances.

CONFERENCE ON HOSPITAL PROBLEMS RESULTING FROM THE WAR, HELD UNDER THE AUSPICES OF THE WAR SERVICE COMMITTEE OF THE AMERICAN HOSPITAL ASSOCIATION.

Reported by Mr. Phiny O. Clark, Supt. Ohio Valley General Hospital, Wheeling, W. Va.

At the invitation of the War Service Committee of the American Hospital Association, Dr. S. S. Goldwater, Superintendent of the Mt. Sinai Hospital, New York City, Chairman, several of the Hospital Executives living near enough to New York, to make it feasible for them to attend one day Conference; about twenty gathered in the New York Academy of Medicine at 10:30 a. m., June 3rd. Dr. Goldwater opened the meeting with a short address on the present dominant Hospital needs, and spoke especially of the need of a National Administrator of Health. We have an Administrator of Food; Administrator of Railways; Administrator of Fuel; why should there not be an Administrator of Health, which is the Nation's greatest asset?

Among the responsibilities of this office, there might be mentioned the following: 1. A standard plan for the operation of Staffs in Hospitals, so that

the essential Medical Men would not be withdrawn for Military Service. 2. The proper selection of men for the Medical Reserve Corps. 3. The proper distribution of Specialists required. 4. The proper standardization of Dispensary or Out-patient help, such as clerks, technicians, etc. 5. The securing of proper materials as students for the Medical Schools. 6. Determine how the present hospitals shall be supplied with internes. 7. The proper training of attendants and technicians. 8. The keeping of Schools for Nurses up to the present high standards. 9. How Hospitals shall compete with the present labor market, for their help. 10. Control of the distribution of supplies; prevent hoarding. 11. The obtaining of commissions for Physicians and Nurses.

Mr. Richard P. Borden, Secretary of the War Service Committee, spoke of some of the hospital problems, especially the necessity of contributing to the Medical Service of the Army. Twenty per cent of the available professional material has already enlisted in the Army or Navy Service. and that five hundred were needed each month to supply the absolute present needs. How can this number be supplied without seriously hampering the work among the civilian Population?

The Program outlined by the Committee, contained among other excellent subjects, the following for general discussion:

Visiting Staff:

Proper limitation of future enrollment.

Volunteer Medical Service Corps.

Possibility of part-time military service.

Dispensary Staff:

Can voluntary service be maintained?

Will the Government or Red Cross aid?

Internes:

War-time standards.

Commissions and the period of inactive service.

How can the smaller hospitals obtain internes?

Medical Students:

Keeping up the supply for Army purposes.

Requirements of civil population.

Nursing Service:

Withdrawal of graduates and supervisors.

Supply of pupils.

How will the new Army Training School affect existing schools?

Should the three-year course be abandoned?

Available registered graduates.

Voluntary aids.

Labor Supply:

Actual shortage of paid workers.

Use of volunteers.

Medical and Surgical Supplies:

Need of stimulating production and regulating distribution.

Where will next year's instruments come from?

Income and Expenditures:

Can the hospitals make both ends meet during the war?

Effect of taxes on donations and bequests.

New Construction:

Needs of civilian population now.

Should civil hospitals attempt to build now?

Will the government facilitate the shipment of materials?

Care of Government Patients:

Army and Navy:

Emergent cases.

Returned soldiers and sailors.

Location and capacity of Army and Navy Hospitals.

Compensation to hospitals.

Federal Vocational Board:

Cooperation with civil hospitals.

Special equipment.

Training of teachers in existing hospitals.

Compensation.

War Risk Insurance Bureau:

Use of civil hospitals for in-patients.

Care of out-patients.

With so many subjects, it was hardly possible to cover the entire field in a single day's conference.

It was suggested that the man who stays at home, believing such service to be his highest duty, should receive some recognition in order that he may maintain his self respect.

It was brought out that the scarcity of internes, could be met partly by the employment of technicians in laboratory work and of clerks in the taking of histories.

It was also suggested, that dictating machines be used to facilitate the taking of histories.

It was suggested that women physicians be given interneships, where only men had been employed before, but it was found that even the womens' hospitals have a shortage of female internes this year.

The following resolution was unanimously adopted by the Conference.

"That under the direction of a Federal Health Administrator or other suitable Federal authority, a program should be prepared for maintaining an adequate supply of properly trained medical students, physicians, and nurses during the war; in so far as the extension of the existing facilities for training may become necessary, the means for such extension should be provided by the government. Surveys in medical and nursing fields which have already been undertaken by governmental and private agencies should be extended, coordinated, and completed. A program should be prepared and carried out, in cooperation with the military authorities, for the most effective disposition of students of medicine who are of draft age and for the modification of their training to meet war requirements. Medical institutions, physicians and nurses should be brought under the direction of the government whenever and wherever necessary, to insure adequate attention to the needs of the civilian population".

The discussion then turned to the supply of nurses for the civilian hospitals, and the proposed plan for the establishment of an Army School of Nursing. Miss S. Lillian Clayton, Principal of the Philadelphia General Hospital School for Nurses, presented the plan outlined for the establishment of the Army School for Nursing, which was briefly as follows: That the War Department had approved the establishment of six Army Schools of Nursing in six of the present cantonments, to test the plan and for the purpose of giving a full three years course, to fit them for enrollment as Army Nurses.

Colonel John A. Hornsby, representing the Surgeon General's office, made it plain to the Conference, the Army School for Nursing plan was to be tested, before it would be extended whatever.

The Conference in further discussion, was clearly of the opinion that the Army Hospitals should be given a trial, as more trained nurses are needed, but that undoubtedly they would work a great hardship upon the civilian train-

ing schools, draining them of their supply of pupils and in other ways, detracting from the present high standard established.

The need then of the civil hospitals of West Virginia, seem to be the training of as large a number of nurses as possible as a patriotic duty, maintaining the very highest standards at all times, even strengthening the course and making the school work more attractive than ever before. West Virginia has already given largely of it's medical fraternity and nurses, yet greater sacrifices must clearly be made in order to meet the demands of the service.

CLINICAL CONSIDERATION OF PEPTIC ULCER.

Read before the Ohio county Medical Society, Wheeling, W. Va., Feb. 1917, intact before the Atlantic Co. Medical Society, Atlantic City, N. J., May 11, 1917.

By J. A. Lichty, M. D.
Pittsburg, Pa.

Any discussion of Peptic Ulcer in order to be clear and concise must include a definite description of the pathology existing in the lesions under consideration. Many of the misunderstandings between pathologists, research workers, clinicians and surgeons, occur, because each has a concept of peptic ulcer entirely his own and differing widely from that of the others.

A lesion not infrequently seen at autopsy is the so-called *uraemic ulcer.* It is found in those dying after middle life. It is multiple; sometimes the entire mucous membrane especially towards the pyloric end of the stomach is studded with punched out ulcers. The bases of the ulcers may be joined underneath a mucous membrane actually seperated from the muscularis, so that a probe may be passed into one and readily appear in the cavity of an adjoining ulcer. It is without symptoms, unless the blood streaked vomiting occurring in the last few days before death may be counted as such. This discovery is usually commented upon as being a part of a general arteriosclerosis in which the kidneys have stood the brunt.

Another ulcerative lesion of the stomach frequently found in the material obtained at autopsy is the one associated with a *thrombosis* and *embolism* anatomically distributed in accord with a certain blood supply of the stomach, One form usually occurs in patients over thirty years of age, while another form of peptic ulcer occurs in the young and is due to a local endarteritis. These forms are most interestingly described by Ophuls, Archives of Internal Medicine, May 1913. The author also ascribes to them a definite symptomatology not unlike that of true clinical peptic ulcer and offered it as a proof of a theory of the etiology of such ulcers.

A third form of ulceration is that supposed to be due to *traumatism,* either from without, as in certain occupations in which the abdominal wall is constantly traumatized, or from within in which certain coarse indigestible articles of food, or foreign bodies in the food, may injure the mucous membrane and lead to definite ulceration. A sequence of events which to my mind is highly improbable.

A fourth form is the *Experimental or Laboratory Ulcer,* in the lower animals which from time to time has been

extensively employed in attempting to demonstrate the etiology of peptic ulcer. These ulcers have ben formed in many different ways. One frequent method being by *cauterization* or *erosion* as applying nitrate of silver to a definite area of the mucosa. Another method by *pressure necrosis*. A third method by the *local Injection* of *adrenalin* or even by its long continued administration by mouth. A fourth method by *bacterial infection*. In this field among the early investigators was Turck who fed colon bacilli to the animals, principally dogs, and under certain conditions succeeded in producing an ulcer very much like a true clinical ulcer. Among the more recent investigators in this field is Rosenow who injects specific micro-organisms of a non-hemolytic type into the blood stream. These by a method of selection seem to affect the mucous membrane of the stomach only and produce an ulcer of a certain type. A fifth method of producing a laboratory ulcer is that produced by certain *specific toxins*. C. Bolton, Quarterly Journal of Medicine, Octobber 1914, page 19, used a gastro-toxic serum formed by immunizing the serum of a goat with the gastric cells of the cat. By injecting this more or less specific serum into the blood stream of a rabbit or a guinea pig an ulcer was invariably formed, in the mucous membrane of the stomach. And a sixth method is that employed by T. R. Elliott Quarterly Journal of Medicine, January 1914, page 119, who used B-Tetra Solution in Normal Salt Solution. He injected this into the abdomen of the cat and in one to two hours has produced an ulcer which under favorable conditions has a tendancy to heal rapidly.

These are a few of the many methods which have been employed to imitate a clinical peptic ulcer. But while the laboratory ulcer approximates in a way the clinical ulcer it does not fill the requirements. It shows a tissue necrosis, which in some cases is quite acute and which heals almost as suddenly as it appears. It reproduces only one stage of the clinical ulcer. It does not reproduce the typical clinical peptic ulcer, at least in so far as we know it. The slowly accumulating factors which must be present in the human body before the ulcer appears are not present in the animal experimented upon, neither are the conditions present which tend to prevent its healing. In other words the laboratory ulcer is a traumatic affair and presents the same differences from a clinical ulcer as a clean cut of the skin would present from a lesion of the skin produced by some constitutional disorder or local lesion.

The ulcer which is to be considered tonight is that form which is described in our books of pathology and medicine as a peptic ulcer. It is scarcely necessary to recall this description, excepting to emphasize the difference between the acute and the chronic forms. They are usually solitary, two to three c. m. in diameter, or if multiple, may be only to five m. m. in diameter. When acute there is no sign of inflammation or repair; when chronic there is definite evidence of a surrounding infection and of attempted repair and cicatrization. The epithelial layer of the mucous membrane seems first to break down to a certain extent, next the muscularis and finally in severe cases the serosa and a perforation occurs. Depending upon the location of the ulcer more or less hemorrhage may occur. Infection necessarily soon takes place and a definite surrounding hyperplasia occurs. The epithelial cells of the glands of the

stomach through an oxydative process produce a layer of enzyme solution which lies between them and the hydrochloric acid and pepsin and thus protects them. (See contribution by W. E. & E. L. Barge in the American Journal of Physiology, 1915, volume XXVII page 462.) So long as the epithelial cells are intact this layer of enzyme is produced, but as soon as the epithelial cells dies or becomes necrotic the protection is lost to all the tissues and necrosis runs riot excepting for that protection which finally comes to tissues from inflammatory reaction. This explains quite beautifully the characteristic "fish hook" appearance of the overlaying edges of the ulcer. The overhanging edge is the epithelial layer with its remaining substrata, still protected by the enzyme, while the rounded edge underneath which forms the wall of the ulcer, at first quite soft but later hard and callous, represents the result between the digestive properties of the gastric juice and the inflammatory reaction from secondary infection.

One would naturally infer from this that an increase of hydrochloric acid and pepsin above the normal would delay the healing of an ulcer. This has been very nicely demonstrated by Bolton, reference to whose experiments has alreadp been made. He found in using his gastric-toxic serums in lower animals the ulcers bathed with a normal gastric secretion healed in a definite time, but when milk or other alkaline substances were fed the ulcers healed more rapidly, and when hydrochloric acid was fed the healing was delayed and the lesion could well nigh be made to assume- the appearance of a chronic ulcer. These facts have an immense clinical significance, even though Dragstedt, Journal American Medical Association, February 3rd, 1917, attempts to refute them by an ingenious experiment on a Powlow pouch in a dog.

In giving this rather superficial description of the pathology of peptic ulcer and making the rather brief references to the disturbed physiological function one already sees that its initial production and course may easily be due to a number of factors, some of which have already been enunciated, and that degree of resistance, whatever this may mean, in the host, may not be the least of these factors.

If the laboratory man could bring about in his animal a certain preliminary state of health conducive to peptic ulcer and then effect a rather contiuous traumatism in whatever form upon the mucous membrane of the stomach or duodenum as occurs no doubt in the human. we would expect the same type of ulcer as is found clinically and we could look upon the measures which led to the healing or cure of that ulcer equally applicable clinically. This he has not yet succeeded in doing. When he does succeed I believe he will find there is not a single definite cause of peptic ulcer.

If I were compelled to give the cause of peptic ulcer I would either say I do not know it, or that my clinical experience and my knowledge of the opinions of others lead me to surmise that conditions may singly or collectively enter into it.

1. A certain change in the blood stream affecting the nutrition of the gastric mucosa. This change may be as prompt in formation and action as that which happens when an extensive cutaneous burn is followed by a duodenal ulcer and may have all of the etiological factors, intoxication, infection etc. which ordinarily enter into arterial change.

2. Disturbances of secretory functions and consequent absence of "protecting enzyme solution".

3. Self digestion stomach tissue. (Producing thus for only acute ulcer.)

4. Secondary bacterial invasion and attempts at repair. (Leading to chronic ulcer.)

The relation of hydrochloric acid secretion to peptic ulcer is no doubt important though it may not be an etiological factor. Where there is no hydrochloric acid peptic ulcer does not occur. The rare distribution of peptic ulcer in the oesophogus and in the jejunum after a gastro enterostomy are incidences which demonstrate the significance of this fact. The effect of hydrochloric acid on pyloric control so admirably demonstrated by Cannon of Boston and Hertz of London also must be an important factor in determining the production and distribution of peptic ulcer. "A study of 104 cases of Perforation of Peptic Ulcer in the Massachusetts General Hospital for the past Twenty Years" by Edw. P. Richardson, published in the Boston Medical & Surgical Journal, February 1st, 1917, shows that the difference between the duodenal ulcer and the gastric ulcer is not only one of incidence but one of absolute character. Of one hundred patients with perforation forty-three were gastric and fifty-seven duodenal. The gastric was usually a chronic ulcer, with considerable induration, while the duodenal was acute with very little evidence of attempt at repair. The mortality in the gastric ulcer was distinctly higher than in the duodenals. The series gave no evidence that pyloric obstruction is a factor increasing the primary mortality which might be avoided by an immediate gastroenterostomy.

If hydrochloric acid is so intimately associated with the formation of peptic ulcer a knowledge of the conditions which lead to a disturbance of its secretion should be a guide to our methods of diagnosis and of treatment of this ailment.

What organic or functional disturbance are usually present when hyperchlorhydria exists? We have long known of its frequency in peptic ulcer, and we also know that in all cases there is an advanced chronic gastritis there must have been in all probability, an initial hyperchlorhydria and with very little mucus, later a throwing out of the protecting mucus in larger quantities with lowered acidity and finally the typical gastric findings, a very low acidity and much mucus characteristic of the disease. We also know that gall-stones, cholecystitis, and adhesions about the gall-bladder as well as chronic appendicitis and chronic pelvic diseases are frequently associated with hyperchlorhydria. And we know of the frequency of hyperchorhydria as a manifestation of a simple neurosis. If hyperchlorhydria is a factor in the production of acute peptic ulcer or if it is only a factor in bringing about the chronicity of an ulcer, certainly these conditions just mentioned as responsible for the acidity must be matters to be considered and dealt with.

The physiological disturbances antedating, or at least accompanying peptic ulcer, are not only of a secretory type such as described, but the motor disturbances are equally as pronounced and as important a factor for consideration. The presentation of the motor activity under normal and pathological conditions is largely due to the late Prof. Pawlow and his pupils, to Cannon, Hertz and more recently to Carlson. According to these investigators it seems that the mechanical disturbances which the stomach presents when a pathological state

exists is of even greater importanec than the secretory disturbances. Clinieally speaking these distubranees go hand in hand and when one is present the other is also found.

With these rather incomplete referenees to the nature of peptic ulcer and of the physiological disturbances which accompany it any discussion of symptoms and treatment will appear more rational than it otherwise would.

The aim in the *diagnosis* of peptic uleer should be the same as in other diseases. It should mean more than giving a mere name, to a complaint. It must include a knowledge as far as possible of the etiology, the character, whether acute, recently acute, or whether chronic, where located and what damage has been done together with the complications which have already arisen. With these questions answered the method of treatment can be easily decided upon and the many differences of opinion which frequently arise as to the conduct of the case may be avoided. Before an audience of this kind it will not be necessary to go into the details of each diagnostie procedure. I shall however in enumerating attempt to emphasize some of the more important points. A good history is the most important point in the diagnosis. A poor history is worse than none at all. We are greatly indebted to Sir Barclay Moynihan of Leeds for so elearly crystalizing the clinical description of peptic uleer. Hunger pains coming three times a day and every day at a more or less definite time after meals and appearing for a longer or shorter time periodically after three, six or twelve months to longer intervals are so eharaeteristic that they are well nigh pathognomoric, as Moynihan at one time had thought.

It is well known however, that a simple hyperehlorhydria without ulceration may be the only abnormality when this symptom is experieneed and also that eertain complications of peptic uleer may so direct the symptom picture as to make it practically unrecognizable. It need not refer to the oceasional obstinate vomiting, loss of weight etc. which the history usually reveals. Next to the history a string test sueh as was first suggested by Dr. Max Einhorn is very important. The distribution o fpeptie uleer being near the pylorus, most frequent on the duodenal side, aeeording to the Mayos, and next most frequent on the lesser curvature a white silk string can searcely eseape being touehed and definitely stained with blood. In chronic uleer without a near surface or in recently aeute ulcers already healed over a blood stain is of eourse not to be expeeted.

The gastric analysis by the well known Ewald method will give confirmatory evidence, especially when food residue is found and when hyperehlorhydria is present. It is of no value unless done exactly according to the preseribed method and should be repeated if any doubt exists. The fractional method described by Rehfus might be used routinely, or certainly where the results of the ordinary tests are doubtful. In using the Rehfus tube I would warn you not to be misled by your results, for at times the button slips quickly into the duodenum and a secretion with a low acidity may be recovered.

Occult blood whether in the stool or the gastrie contents must be interpreted, and when not due to a lesion in the orifiees at either end of the digestive traet is most likely the evidenee of a peptic uleer.

A simple retention test consisting of raw lettuce may give satisfactory evidence of any disturbed gastric motility,

but a barium X-ray examination which should be done in all cases where it is possible and seems expedient will obviate the necessity of this. The X-ray examination in gastro intestinal diseases has come to us with a great deal of promise and hope, some of which has been realized, but a large part, especially as done by some roentenologists has been misleading and detrimental to the patient. If we remember that X-ray findings must be interpreted as all other laboratory findings must be, no harm can be done and it is a most valuable adjunct. A most interesting paper by Dr. John Homans in the Boston Medical and Surgical Journal, November 9, 1916, entitled "Trans Duodenal Bands" gives a revelation of the possibility of mistakes in diagnosing peptic ulcer especially when located in the duodenum which is certainly illuminating. Homas reports eleven cases occuring at the Peter Bent Brigham Hospital in which definite bands passing from the gall-bladder and liver across the duodenum to the pancreas or the colon have been found and in which disease of the gall-bladder, duodenum and stomach have been held to be absent. This condition seemed to be responsible for symptoms which in some pointed to gall-bladder disease, in other to peptic ulcer, carcinoma or chronic appendicitis. The deformities in the duodenal cap were definite in three of these cass and yet at the operation no ulcer was found. It is thought these bands caused a spasm of the duodenum much like the spasm from peptic ulcer. This invalidates to an extent the value of the duodenal cap as a pathognomonic sign of ulcer.

To make a diagnosis of peptic ulcer as nearly positive as posible the patient should be in a well organized and well equipped hospital, where tests may be carried out routinely and where diagnostic team work is available to eliminate other possible conditions which so frequently simulate peptic ulcer. Among these conditions may be mentioned gall-bladder and duct diseases, appendix diseases, pancreatic diseases, tuberculous infection especially of the peritoneum, syphilitic disease, especially the manifestation of spinal syphilis, disease of the pelvic organs and tissues, pregnancy and other well known conditions which sometimes give rise to confusing symptoms.

The treatment of peptic ulcer must be directed to the causes which have permitted it or induced it to occur and to the damage which has been done. While we can say very little definite as to the first part, as has already been suggested in this paper, yet, focal infections, sub-infections, extragastric pathology and the neuroses should receive attention and if possible should be eliminated. The second part must be conducted on the basis of the amount of damage which the gastric duodenal tissue has sustained. If the diagnosis is made as complete as have suggested in this paper, the knowledge of the extent of the damage will be already at hand.

I might as well confess first as last that the purpose for presenting this paper, with the minute and I fear tedious detail of the etiology of peptic ulcer as its introduction is largely to confute emphatically the idea which seems to be more or less prevalent among certain of the profession that peptic ulcer is a "surgical condition", and that only. This idea has done a great deal of harm to its patients who I believe would otherwise be comparatively comfortable it not well, and I feel it my duty to show as definitely as possible that peptic ulcer is from its very nature a medical disease, and

only becomes a surgical disease under certain very definite conditions. It is not necessary to go into a academic discussion of what is meant by a "medical disease" as distinguished from "surgical disease". The distinction is well appreciated by all.

There is no question that a large proportion of peptic ulcers when they were recognized on account of the extensive lesions, or on account of the complications have a surgical aspect. I will first mention these conditions so that it will be definitely understood what cases should have medical treatment alone.

In cases of perforation surgical interference must be immediate and medical and dietetic treatment must follow. In cases of severe or repeated hemorrhages surgical treatment is also desirable. I know of no more difficult problem however than such a case usually presents. In an experience of twenty years I have had but one case operated for hemorrhage alone. After a gastro-enterostomy the hemorrhage ceased permanently. I have had two patients die from hemorrhage. Of all the surgeons who saw these cases none favored operation. When the stomach, pylorus, or duodenum are so decidedly damaged and the function is disturbed to the extent as to interfere materially with the patient's general health or efficiency, surgical treatment is necessary. These last factors cannot always be made clear during an examination made for diagnostic purposes. Sometimes it is desirable to institute a preliminary course of medical treatment and observe the results, before deciding to operate. When the patient has relapses either on account of not following faithfully the medical course outlined. or because the condition and location of the ulcer are such that healing is impossible, and operation should be done. The possibility of an ulcer being the nidus of a beginning malignancy as has been so graphically pointed out by the Mayos must always be kept in mind. But wholesale operations on every peptic ulcer dare not be advocated because a few present this complication. The diagnosis of early gastric cancer, however difficult, must yet be based upon the symptoms and findings of such disease and not upon the symptom complex of peptic ulcer. In connection with this phase of the question it must be called to our attention that peptic ulcer may be looked upon in a way as a self limiting disease. No doubt many ulcers heal without being detected by the patient or recognized by the physician. The patient's own instinct or reason will lead him to retrench on his diet or alter it so that the ulcer will heal and may not recur. To happen accidently upon such an ulcer and immediately operate because it is a so-called "surgical condition" or because it might become malignant would expose the human race to unnecessary risks.

In a more or less extensive consultation practice I have occassionally found it unfortunate to announce to the physician that an ulcer is present, especially if it was demonstrated with the X-ray examination. Surgery is immediately insisted upon and a surgeon is found who will operate.

The success of the medical treatment which I shall outline depends upon a number of important factors, not the least of which is early recognition. It is as essential, or even more so, as the early recognition of pulmonary tuberculosis. This point has been emphasized by Joslin's "Study of the End Results of 234 Patients," suffering with peptic ulcers, and reported in the Journal of the A. M. A. Nov. 21, 1914. He found that the patient did not consult a phy-

sician or did not receive any rational consideration from a physician until the disease had existed on an average of five and one half years. I believe if the disease could be recognized early and prompt medical treatment instituted in a patient who would cooperate a very large percentage of all cases would get well and very few would need surgical consideration.

The course of medical treatment should be determined upon by the degree of acuteness of the symptoms. Obstinate nausea and vomiting, especially with the presence of blood in the vomitus, or with blood in the stool, or a positive string test indicate the necessity of most rigid care. The patient must rest in bed, preferably in a hospital, and have a trained nurse. Food should be withheld from the mouth and glucose feeding by the rectum done. The glucose solution should consist of 56 grams to the litre of normal Salt Solution and containing about 45 minims of deodorized tincture of opium. One and one half litre may be given by the Murphy drip method in twenty-four hours. If the stomach is retentive bismuth subcarbonate, or sodium bicarbonate or magnesium oxide or tincture of belladonna may be given in doses depending upon the degree of the acidity, the amount of pain and other conditions. At the end of five or seven days if the symptoms have subsided and if the string test should be negative to blood, food is also given by the mouth, beginning usually in the following order and amounts. Every two hours two ounces of either white of egg water, barley water, cream and vichy water or milk and lime water. These amounts are increased and the grades changed as conditions will permit, in about the following way; four ounces, six ounces, eight ounces. The intervals between the feedings are made three hours and rectal feeding discontinued. This may be after an interval of ten days of two weeks. The alkalies may be given midway between the feedings. To the food above specified is added. gruels, junket, custards, ice cream, raw eggs, soft boiled eggs, milk toast, cereals, toast and butter. Mashed green vegetables boiled potatoes, any whole vegetable not sour, and finally most any dietetic dish which can be made from milk, cream, butter, eggs, flour and sugar, also stewed and raw fruits, not sour, are now allowed. The diet is brought up to the full calorie requirements and the patient is kept upon this for months reporting at intervals for changes in diet. The stay in the hospital is from three to four weeks.

This is the treatment of an acute typical case. At any period in the course, the treatment may have to be modified. Rectal feeding may not be tolerated, which is not a great misfortune. The resting of the stomach goes on the same or food may be given by mouth sooner, or at once. The string may reveal a blood stain after five to seven days of treatment. The same treatment is continued for five days longer when if the stain is still obtained, duodenal feeding through an Einhorn tube is instituted for ten to twenty days. Milk, cream, eggs and sugar to the value of 2,500 calories per day may easily be introduced. Sometimes in the course of such a treatment conditions and complications are revealed in the case which show that further

medical treatment is useless. Surgical intervention is then instituted.

I have refrained from attaching any name to this methods of treatment. No one can outline a treatment and attach his name to it and expect it therefore to be of universal application.

Common sense methods which will meet the indications, such as reducing the acidity, avoiding food stasis and food traumatism and furnishing sufficient calories, are all that are needed.

Certain complications which occur during the course of medical treatment should be mentioned. They will be very few if proper care is instituted. Constipation should be overcome with the diet or such alkaline laxative as magnesium oxide. Pain if not relieved by the treatment already suggested may be met by the administration of orthoform, or codeine or morphine.

Treatment conducted on the lines suggested is most satisfactory providing the cooperation of the patient can be obtained.

To compare the results of medical treatment with those of the surgical is misleading and impractical. It amounts to about the same as comparing the results of the ordinary treatment for typhoid fever with the results of the treatment of the surgical complications. In conclusion I would say that these important conditions which lead to better results in the treatment of peptic ulcer are:

1. Early recognition and knowledge of the extent of the lesion.
2. Perservance in medical treatment.
3. Prompt recognition of indications for surgery.

CONDENSED NOTES ON HISTORY OF FIVE OF FIFTEEN CASES OF DEMENTIA PRAECOX TREATED BY ISOTONIC SALT SOLUTION, ADMINISTERED INTRAVENOUSLY OR BY HYPODERMOCLYSIS AT THE HUNTINGTON STATE HOSPITAL, DURING THE YEAR 1917.

By L. V. Guthrie, M. D.

Reprinted by permission from Dementia Praecox Studies, May, 1918.

Case 1. Erine McKee, female, aged eighteen. Dementia praecox (hebephrenica), stupor, mutism, unclean, etc. Date of commitment, August 3, 1916. Was insane previous to commitment, four months. Was a patient at this institution nine months before this treatment was administered. During this period of thirteen months there has been no improvement in patient's condition. Was discharged May 18, 1917.

The infusion was given as follows: 500 cc., 700 cc., 1,000 cc.

Resuts—After first infusion patient was not so stupid but talked little—has improved in cleanliness and habits and is more easily managed. After second infusion, smile and expression not so much demented and is beginning to wait on herself and do little, odd chores about the ward. One week after third infusion, patient much improved and for the first time expressed desire to go home—said that she knew she had acted foolishly—now is almost normal in manner and conversation. A week later she was removed from the institution and when last heard from was visiting relatives and apparently normal to all outward appearances. Patient's physical

condition had also greatly improved when she left the institution and, I am informed, that she continues in good health.

Case 3. Nora Hopkins, female, aged twenty. Dementia praecox (catatonia), stupor, mutism, patient has been sitting in a chair most of the time during the day for the past year. Date of commitment, August 15, 1916. Was a patient at this institution ten months before this treatment was administered. There were no periods of improvement in the patient's mental condition during those ten months previous to treatment. Was discharged October 21, 1917.

The infusion was given as follows: 400 cc., 700 cc., 800 cc., 800 cc.

Results—The next few days after the first infusion no marked change noticed in patient's mental or physical condition but on the sixth day the assistant physician inquired of her as to how she felt. She replied promptly that she was feeling much better and smiled for the first time since admission. After second infusion patient seems much better, talks freely when spoken to and is frequently found busy working around the ward—asked the physician not to put the needle in her again as it pained (during the first and second infusion patient remained on the operating table in a stupor during the operation and had apparently not felt the needle). After third infusion patient writes a well-worded and intelligent letter to her husband, the first time she had written since her admission here, and asked him to have her removed from the institution on parole. On following day, patient writes a letter to her mother. Patient at this time seems greatly improved and almost normal, with the exception of a silly smile when joked with. After fourth infusion patient smiles naturally and continues to improve. Asked the physician to find out where her husband was located, as her letter had been returned. Patient wants to go home—said she knew she had been a "regular devil," that she had climbed the window guards, disrobed, and was extremely sorry she had put the attendants to so much trouble, but that she could not resist her feelings at the time. This patient is apparently normal and has been at home for several months. Her physical condition improved rapidly while taking the treatment and during this time she gained twenty-five pounds in weight.

Case 4. Emma Kruger, female, age forty. Dementia praecox (catatonia), mutism, resistant, fixed position, refuses hand, etc., very much emaciated, had been tubed or forcibly fed for more than a year. Transferred to this institution from the Laurel Retreat Maryland. Date of admission here, May 20 1917. Was insane previous to commitment several months. Was a patient at this institution two months before this treatment was administered.

At the time the patient was admitted to this institution, the diagnosis and prognosis, as originally made was fully concurred in by the medical staff at this institution. In fact, "Incurable" was stamped on the patient's countenance and general attitude, and she had the makeup of advanced, chronic, and incurable insanity. Was discharged February 20, 1918. Doing well at latest report, April 9, 1918.

The infusion was given as follows: 1,000 cc., 1,000 cc., 500 cc., 800 cc., 800 cc., 600 cc., 500 cc., 750 cc., 725 cc., 625 cc., 425 cc., 800 cc., 500 cc., 700 cc., 850 cc., 1,000 cc.

Results—Within twenty-four hours after first infusion, she voluntarily went to the table and ate her first meal since

her admission here. After second infusion, when the attendant told her to go to the scales and be weighed, she immediately complied, very much to our surprise, but no other change in her condition. Following third infusion there was no change except a slight gain in weight. Fourth and fifth infusions and condition remains the same. After sixth infusion there was no apparent change for two weeks, when she unexpectedly complied with the physician's request and shook hands with him and replied to a question that "she felt all right." At this time she manifests interest in work about the ward — makes her own bed, goes to table and feeds herself, eats heartily and has put on a considerable amount of weight. Is gradually getting better. Later, is normal in manner and conversation, takes long walks by herself and with other patients. Takes interest in needle work, crocheting, etc., and works several hours a day at the general kitchen and does all this voluntarily and in a contented frame of mind, except that she wants to go home to her people. To all appearances she has been restored to her normal mental condition. After remaining in this condition some three or four months, apparently in good health, she returned to her family in Wheeling, West Virginia, and I am recently informed, is normal in every respect (March 9, 1918). This case is of particular interest, as she had been pronounced an incurable dementia praecox by competent physicians in Baltimore where the diagnosis had been made. I agreed in the diagnosis and prognosis and commenced the treatment without faith in results.

Case 9. Laura Oliver, female, aged thirty-five. Dementia praecox (catatonia), depressed, mutism, negativism, fixed position, emaciated, very unclean. Necessary to use forced feeding for past several months. Patient very indifferent to surroundings. Date of admission, July 28, 1917. Was insane several months previous to admission. Was a patient at this institution eight days before this treatment was administered. Was discharged March 15, 1918.

The infusion was given as follows: 900 cc., 1,000 cc., 1,000 cc., 175 cc., 375 cc., 650 cc., 800 cc., 750 cc., 730 cc., 825 cc., 825 cc., 700 cc., 500 cc., 750 cc.

Results—Patient has shown a slow but gradual improvement from the time of first infusion. This was noticed by the patient going to the table and eating her meals without being forced or helped. After first infusion, gave her answers to questions in monosyllables and rate of thought was very slow and hesitating, but she now give prompt and intelligent answers, is clean in habits, has put on weight rapidly, and is very easily managed. Writes intelligent letters to her husband and shows satisfactory improvement. Is beginning to become homesick and shows a normal desire to see her children. Later: Husband has removed her from the institution to her home and I am informed that she is assisting in the care of her children and getting along nicely. I regret that this case did not remain with us a few months longer.

Case 12. M. M., female, aged twenty-eight. Dementia praecox (catatonia), stupor, mutism, negativism, resistant, fixed position, unclean, etc. Date of admission April 18, 1913. This patient had been insane more than five years previous to admission to this institution and had been gradually getting worse from the beginning. She had been under

my personal observation more than ten years previous to giving the Isotonic Salt Solution.

The infusion was given as follows: (1917) May 13, 550 cc., May 20, 700 cc., June 6, 800 cc., July 15, 500 cc., July 21 1,000 cc., August 12, 650 cc., December 15, 330 cc., December 18, 750 cc., (1918) January 1, 600 cc., January 14, 1,000 cc., January 29, 1,000 cc., February 5, 1,000 cc., March 15, 500 cc.

Results—The treatment was commenced May 13, 1917, but after giving the infusion at intervals of seven months, patient's condition was practically unchanged, with the exception that she complained that the needle gave her pain, while previous to this time she had lain in a stupor on the table and had not seemed to notice the needle was used. After taking ten injections, covering a period of several months, she had a lucid interval—went to the mirror, dressed her hair and remarked in regard to her personal appearance, "I wouldn't have thought it". On the same day she went to the piano and played as any normal person would do and carried on an interesting conversation with her sister. However, since that time, January, 1918, she has relapsed into her former condition — stays in bed practically all of the time and has applied so much pressure to her chin with fingers and thumbs that there has been a very noticeable atrophy of the tissues. The only lucid interval this patient has had at any time while in this institution occurred during the month of January, 1918, and I think it more than a coincidence that this was the only month in which she had her treatment in full sized doses and at more frequent intervals than during any other month.

I have had much better results in the treatment of females than males. However, several of the male patients have shown considerable improvement but none of them have been cured. In no instance have we seen an elevation of temperature or unfavorable symptom follow the use of these injections and in this, and also in the number of cases showing decided improvement and cures it seems that we have had better results than Ishida.

ANNOUNCEMENTS AND COMMUMICATIONS

Dear Sir:—

Professor Stieglitz, Chairman of the Sub-commitee on Synthetic Drugs of the National Research Council, has asked me to send you the enclosed letter for publication.

On behalf of the Committee, he also urges that you adopt the Federal Trade Commission's recommendation to use the official name of the licensed drugs in connection with all written articles and advertiesments, and if the proprietary brand name is to be used, to place this side by side with the official name.

The official names so far adopted by the Federal Trade Commission are:

Arsphenamine for the drug marketed as: Salvarsan, Diarsenol and Arsenobenzol, etc.

Neoarsphenamine for the drug marketed as: Neosalvarsan, Neodiarsenol and Novarsenobenzol, etc.

Barbital for the drug marketed as Veronal.

Barbital-Sodium for the drug marketed as Medinal and Veronal-Sodium.

Procaine for the drug marketed as Novocaine.

Procaine Nitrate for the drug marketed as Novocaine Nitrate.

Phenylcinchoninic Acid for the drug marketed as Atophan.

Yours truly,

W. A. Puckner.

Procaine and Novocaine Identical

To the Editor:—

It appears that in certain quarters the attitude is taken that the local anesthetic as Procaine is not identical with that marketed as Novocaine. The Sub-committee on Synthetic Drugs of the National Research Council believes it important that this misunderstanding should be corrected and hence offers the following explanation:

The monohydrochloride of para-aminobenzoyldiethyl-amino-ethanol, which was formerly made in Germany by the Farbwerke vorm. Meister, Lucius & Bruening, Hoechst A. M., and sold under the trade marked name Novocaine is now manufactured in the United States. Under the provisions of the Trading with the Enemy Act, the Federal Trade Commission has taken over the patent that gave monopoly for the manufacture and sale of the local anesthetic to the German corporation, and has issued licenses to American concerns for the manufacture of the product. This license makes it a condition that the product first introduced under the proprietary name "Novocaine" shall be called Procaine and that it shall in every way be the same as the article formerly obtained from Germany. To insure this identity with the German Novocaine, the Federal Trade Commission has submitted the product of each firm licensed to the A. M. A. Chemical Laboratory to establish its chemical identity and purity, and to the Cornell pharmacologist, Dr. R. A. Hatcher, to determine that it was not unduly toxic.

So far, the following firms have been licensed to manufacture and sell Procaine:

The Abbott Laboratories, Ravenswood, Chicago.

Farbwerke-Hoechst Company, New York, N. Y.

Rector Chemical Co., Inc., New York N. Y.

Calco Chemical Company, Bound Brook, N. J.

Of these, the first three firms are offering their products for sale at this time, and have secured their admission to New and Non-official Remedies as brands of Procaine which comply with the New and Non-official Remedies standards.

While all firms are required to sell their product under the official name "Procaine", the Farwerke - Hoechst Company is permitted to use the trade designation "Novocaine" in addition, since it holds the right to this designation by virtue of trade mark registration.

In conclusion: Procaine is identical with the substance first introduced as Novocaine. In the interest of rational nomenclature, the first term should be used in prescriptions and scientific contributions. If it is deemed necessary to designate the product of a particular firm, this may be done by writing Procaine-Abbott, Procaine-Rector, or Procaine-Farbwerke (or Procaine (Novocaine brand)).

Yours truly,

Julius Stieglitz, Chairman,
Sub-committee on Synthetic Drugs
National Research Council.

In regard to the Surgeon-General's request for 100 more doctors from West Virginia at an early date, not more than thirty of these are in sight so far. There is in our towns an ample number of eligible physicians of suitable age who could be spared by the community. It is to be hoped that these will come forward without further delay and offer their services. It is inconceivable to think that we would send soldiers to France without a proper number of doctors to look after them. West Virginia

now stands 27th in the order of states in regard to the number of physicians who have applied for commissions in the Medical Reserve Corps. Charleston has the distinction of being the 13th city in the United States in regard to the number of physicians enlisted. The following is a list of counties of West Virginia with the number of physicians from each county who have accepted their commissions in the Medical Reserve Corps, as listed by the Journal of the A. M. A. issue of June 15th.

State of West Virginia:

Commissioned in M. R. C.

Barbour	1
Berkley	8
Boone	2
Braxton	2
Brooke	3
Cabell	14
Calhoun	1
Clay	3
Doddridge	1
Fayette	9
Gilmer	2
Grant	0
Greenbrier	1
Hampshire	0
Hancock	4
Hardy	1
Harrison	7
Jackson	2
Jefferson	1
Kanawha	34
Lewis	3
Lincoln	2
Logan	3
McDowell	7
Marion	7
Marshall	7
Mason	3
Mercer	8
Mineral	2
Mingo	7
Monongalia	7
Monroe	1
Morgan	0
Nicholas	3
Ohio	11
Pendleton	2
Pleasants	1
Pocahontas	2
Preston	3
Putnam	1
Raleigh	4
Randolph	6
Ritchie	4
Roane	6
Summers	3
Taylor	2
Tucker	2
Tyler	3
Upshur	1
Wayne	1
Webster	0
Wetzel	2
Wirt	0
Wood	2
Wyoming	1

In order to alleviate in some measure at least the very great shortage of graduate nurses for army service, the Surgeon-General has planned to establish nurses training schools in the various cantonment hospitals. The instruction given will be of the highest type. This offers a great opportunity for patriotic young ladies to render service to their country. The course of instruction planned is for three years.. If, owing to an early ending of the war, the Government should be unable to complete the full three years of tuition, a certificate showing the time served will be given, in order that the pupil nurse may receive credit from any civilian hospital in which she may elect to finish her nursing course. Applications should be made to the Surgeon's Office, Department of Nurses' Training Schools, War Department, Washington, D. C.

J. E. Cannaday,
Maj. M. R. C.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., EDITOR
C. R. ENSLOW, M. D.
J. E. RADER, M. D. ASSISTANT EDITORS

Huntington, W. Va., July, 1918

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

ADVERTISEMENTS

Advertising forms will go to press not later than the 10th of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

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Should be made by check, draft, money or express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

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West Va. State Department of Health.

Our Commonwealth is not very large geographically; neither is it so very old comparatively. Yet we *"Natives"* believe it to be just about the centre of the original Garden of Eden.

This is called forth by a report received from Dr. Jepson, State Commissioner of Health, entitled, "A Sanitary Survey of Charleston, West Va., "The report is made to the State Health Dep't. by Mayo Tolman, it's chief engineer. In his letter of transmission, Mr. Tolman says:—

"In preparing this report it has been the writer's earnest endeavor to put the material gathered in a readable form that will invite the persual of the average citizen. It is only through stimulating public opinion that lasting benefits are gained and it is hoped that this report may in some slight measure arouse the people to the conditions that exist about them."

We have very just cause to be rather proud of our State Health Department. When you stop to think it has had to be developed from "the bornin' out", you must admit that much has been done. Certainly there is much yet to

be done. We have heard criticisms of the way of doing things and it is but natural that the road must be cautiously traveled.

It is entirely fitting that our "Capital City" should first be gone over with "a fine tooth comb", as it were by this Department. Let us be a model at that point for other States to copy. But now let not the good work end with this review of Charleston. Surely they needed it, or it would not have been done. It is up to Geo. Mac Queen and his Council now.

This is but the beginning, however, for I am sure all of the rest of the cities in West Virginia would be greatly benefitted by such timely Diagnosis. Results may only be secured by the administration of the proper therapeutic agents. Let us have the U. S. P. preparations too, not the proprieteries that most local health departments give. My observation is that they are largely Narcotics and Sedatives which really are banned under the Harrison Act.

Let the citizens of West Virginia know that when it comes to health matters they do not get value received in their local expenditures. CUT OUT THE POLITICS AND GET RESULTS.

It is to be hoped that we members of the organized profession in the State will lend the full force of our influence to the State Health Department, in every way possible, to advance it's work.

SURGEON-GENERAL GORGAS IS SIXTY-THREE YEARS YOUNG

The *Washington Post* on May 7 is responsible for the statement that Surgeon-General Gorgas will reach the retiring age of sixty-four on October 3, 1918. Of course this does not mean that General Gorgas will be retired in October, because no one would consider retiring a man who every day is demonstrating his youth and efficiency in a position of such great responsibility as that of Surgeon-General of the United States Army during the greatest war in history.

Those who are in a position to know, regard General Gorgas as second in efficiency only to President Wilson; and they marvel at the work he has accomplished in the past year.

Years ago General Gorgas demonstrated that the white man can live, thrive and accomplish as much in the tropics as in colder climates, if malaria and other tropical diseases have been eradicated.

President Wilson is somewhat younger in years than General Gorgas, and since he has one of the best doctors in the country to see him every day, to keep him well, he may be expected to continue his wonderful degree of efficiency for many years. General Gorgas is his own doctor and he is engaged in the small undertaking of keeping a million and a half boys and young men from catching measles, pneumonia and some diseases that do not affect the respiratory organs, that afflict those who have not learned how to take care of themselves,—and he is doing both jobs better than any man before him ever did. If one knows of the regular life and simple and abstemious habits of General Gorgas he can understand how at sixty-three years he is younger than many men of forty.

Aside from the fact that there is no one who could so ably take the place of General Gorgas as Surgeon-General, the United States and the world owe him such a debt of gratitude that he could not be retired until his labors during

the present War have been completed. His conquests over disease have been more brilliant and epoch-making than those of any general who has fought battles against man. Gorgas has brought health and happiness to millions, while wars against man have made countless thousands mourn.

The wisest, and most considerate man in the world appoints the next Surgeon-General of the United States Army; and since President Wilson holds justice and efficiency in such high esteem, there can be no doubt of the reappointment of Surgeon-General Gorgas when his term expires, or when he comes to the age of retirement. If the President has not the legal right to appoint a retired officer as Surgeon-General, Congress will enact a law giving him that privilege. Our country and the world need General Gorgas too much for his retirement to be considered until we and our Allies have conquered the Huns.

Abbst. Ed. So. Med. Jour., May, 1918.

During May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Geo. W. Brady & Co.:

Barium Sulphate-Brady for Roentgen-Ray work.

Johnson and Johnson:

Chlorine-Soda Ampoules.

Lederle Antitoxin Laboratories:

Antipneumococcic Serum, Type 1.

Monsanto Chemical Works:

Chlorcosane-Monsanto.

Morgenstern & Company:

Acid. Phenylcinch.-Morgenstern.

Acid. Phenylcinch.-Morgenstern Tablets.

Sodium Phenylcinch. Water-Morgenstern.

Parke, Davis & Company:

Antipneumococcic Serum, Type 1.

Rector Chemical Company, Inc.

Procaine-Rector.

E. R. Squibb and Sons:

Antipneumococcic Serum, Type 1.

STAND BEHIND THE BOYS.

How many doctors have applied this now very expressive phrase to themselves? There is nothing that puts more heart and gives so much confidence to a soldier in the thick of a fight, than the thought that if he does suffer a casualty, he will receive proper medical care and attention. What are you doing in this respect?

There are many boys, sons of your patients or friends who have been or will be called into the service, and what a source of consolation it would be to the parents to know that possibly their own doctor might be the one to look after their boy and they will welcome your acceptance of a commission in the Medical Reserve Corps and compliment you for so doing.

The opportunity for you to do the most good in a professional way to the greatest number of people, is to offer your service to your country through the Medical Reserve Corps. Do not think longer about it, but apply at once to your nearest Medical Examining Board, and if you are not informed of its locality, the Editor of this *Journal* will supply the necessary information.

STAND BY OUR BOYS, YOUR BOYS, THEIR BOYS. Remember the gallant *French in '67. The British who stood by Dewey in 1898. The Garibaldis who were always for LIBERTY.*

The rapid expansion of the Army calls for a largely expanded Medical Reserve Corps. The Surgeon General has is-

sued a most earnest appeal for doctors. The Department has reached the limit of medical officers available for assignment.

DOES IT PAY TO CURE?

Elsewhere in this number Dr. L. V. Guthrie recounts his success in contributing fifteen thousand dollars to the Commonwealth of West Virginia by restoring five females to their distracted and woe-weary families.

We can not help but wonder how his Board of Control looks upon this therapeutic adventure. Have they offered him additions to his medical staff and adequate equipment to carry on his work in a more extensive, intensive, and systematic manner? Or have they, perhaps, pushed down the soft pedal and called for "watchful waiting," the method of easy going?

Is there any other State Hospital among the three hundred in the United States where the same efforts have been made to cure? Have any Boards of Control urged their medical staffs to try out this method of Guthrie's on their female patients? Has the Board of Control of West Virginia instituted similar methods of treatment in their other State Hospitals?

In January, 1918, there were more than two thousand insane persons in West Virginia, and probably sixty per cent. of these suffers were cases of dementia praecox. That means that there were twelve hundred dementia praecox patients in the State for whom custody alone, during their average life of fifteen years, would be a liability of three thousand dollars each to the state treasury, or an aggregate liability of $3,600,000. This is not an insignificant sum in war times. By curing five patients Dr. Guthrie has removed fifteen thousand dollars from this liability, while the labor of thes five patients and the added usefulness of their happier families is a positive though indirect asset that any statistician would not fail to consider. If the desire for cure were equal to the drive for economy which the war has forced upon our forty-eight Boards of Administration of lunacy, the 140,000 dementia praecox now confined in our State Hospitals would not all die in custody.

With the scant publicity which this method of cure has received there are many sad and desperately pathetic letters coming to the curing doctors, begging for assistance which the bureaucratic ruling of state officers has too often denied. Suppose that only one in ten is cured by this method, West Virginia could be relieved of 120 patients now in custody and $360,000 could be stricken from the liabilities of the state treasury.

West Virginia is a small state, New York is a large one. During nine months (ending July 30, 1916) 1,213 dementia praecox patients were admitted to the State Hospitals of New York, or 1,617 for the year. If only ten per cent. of these were cured, there would be an annual reduction of the State's liabilities of not less than $483,000. Only seventeen patients recovered in nine months, twenty-two, not 161, for the year! If the furore for cure in any degree approached the furore for economy, for cosmetic cleanliness, for system, for standardization, for institutional serenity, can anyone doubt that such a pitable showing would be made in New York, our largest, richest, and most enlightened State?

New York has a Psychiartric Institute for which the State expends twenty-five thousand dollars a year, while seven million dallars are spent on custody. This

is hardly economy. Is not the greater economy to effect a cure?

—B. H.

"West Va.'s Program in Psychiartry."

We feel sure that the profession throughout the State, with very few exceptions, does not realize just the standing West Va. has in the U. S. in it's care for the Insane. It is for this reason that the article from a National publication, devoted entirely to the Study of Dementia Praecox is reprinted. Surely we have just cause to be proud of the research work of our specialists in these lines.

For more than seven years the Editor of your *Journal* was associated with the staff of the Huntington State Hospital. so he feels a pardonable pride in the fact that cures of patients with Dementia Praecox are reported from the institution which seems to him, in a way, a personal possession. While for the past five years we have not personally been associated in the work, we have watched it with close interest.

So far as the support of the Governors and the State Board of Control about which Dr. Bayard Holmes asks in his Editorial, which is reproduced above, is concerned it is a matter of my personal knowledge that these gentlemen have been very liberal. The idea has gained root in West Virginia that it is expensive economy to be niggardly of appropriations to bring the staffs of the various Institutions up to a high standard of proficiency. This policy I am sure will be continued under the present Governor and his Board of Control.

The editorial of Dr. Holmes is given because of it's value in showing the work being done in this line throughout the country and it's actual value in dollars and cents to the various States.

Society Proceedings

Huntington, W. Va., June 15th, 1918.

Dear Doctor:—

Enclosed I am sending you the reports of the last two meetings of the Cabell County Medical Society.

The Cabell County Medical Society met on May 25th at the Hotel Frederick with the following members present: Drs. Rowsey, Hogg, Hardwicke, Guthrie, Yost, Hunter, Hicks, Neal, Bloss, H. P. and E. B. Gerlach, Mathews, Fitch, Morrison, Pickering, Watts and Pepper. The President being absent, Dr. Fitch was elected, Chairman pro tem. Dr. J. A. Guthrie reported an interesting Clinical Case, and a Roentgenogram of the same was shown by Dr. Pepper. The discussion was opened by Dr. Hicks followed by Dr. Hunter, Drs. Neal and Watts also reported Clinical Cases. Dr. Hicks gave an interesting talk on his visit to New York. It was moved by Dr. Hunter and seconded by Dr. Guthrie, that Dr. Hicks give the society at the next regular meeting a paper on the "Amputation of the Cervix Uteri". Carried. Dr. Hunter gave a talk on the war situation as it related to the M. R. C. Dr. Bloss moved that the Cabell County Medical Society instruct the Secretary to have appropriate cards printed to be hung in the reception room of its members, asking patients to at once make known that they are regular patients of men in the service and further that when so notified the physicians shall keep all charges in distinctive form and that 50 per cent. of all money collected from such patients shall be paid to the said Doctor's family or dependents. Seconded by Dr. Hicks. Carried. The Society then adjourned.

The Cabell County Medical Society met at the Hotel Frederick on June 13th, 1918. The minutes of the last meeting were read and approved. The following members were present:

Drs. Pickering, J. C. and A. K. Kessler, Yost, Rowsey, E. B. Gerlach, Fitch, Lieut. Schultz, Marple, Hardwick, Watts, Hatfield, Prichard, Rader, Vest, Morrison, Baker, Bloss, H. P. Gerlach, Hawes, Pepper and Dr. Musgrave of Barboursville, visiting. The routine of business was suspended and the society proceeded to the program of the evening, a paper by Dr. W. E. Vest, entitled, "The Medical Management of Acute Abdominal Pain". After the reading of this interesting and instructive paper the discussion was opened by Dr. E. B. Gerlach followed by the members of the Society.

Lieut. Schultz, addressed the Society on the preliminary preparation of physicians joining the M. R. C. and the nature of the work required of them. Dr. Rader made a report on the number of physicians that were at present in the M. R. C. and those who have applied for commissions. He reported 9 in service, 5 had been commissioned but not been called, 4 had applied for commissions.

In lieu of the rumor that the City Commissioners were to curtail expenses by discontinuing the office of milk inspector of the city, it was moved and seconded that the society recommend that the city continue in office a qualified Veterina ry to inspect the herds and dairies for tuberculosis etc. and that a qualified man be employed as milk inspector, Carried. On motion the society adjourned.

R. H. Pepper, Sec.

Parkersburg, W. Va., June 10, 1918.

The Little Kanawha and Ohio Valley Medical Society met at the Chancellor Hotel, Friday, June 7 at 9 p. m. the president, Dr. R. L. Brown in the chair, present: Drs. Prunty, Camden, Richardson, Gaynor, Wise, Campbell and Giltner.

The minutes of previous meeting were read and approved.

A motion was made that on account of the long and faithful service of Dr. T. A. Harris, as a member of this society, that his dues be remitted for life. Motion carried.

On motion the secretary was instructed to inform members in arears that dues for 1918 must be paid in order to be restored to good standing.

The following delegates to the State Association were elected: Dr. E. Goff, Spencer and Dr. R. B. Miller, Parkersburg. A bill for $11.20 in favor of the Ohio Valley Printing Co. was allowed.

On account of the volume of other business paper on "The Superiority of the Fractional Examination of Gastric Contents" was postponed utnil the next meeting.

The Society then adjourned to meet the first Thursday in October.

H. A. Giltner, Sec'y.

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The Mercer County Medical Society, met in regular session, at the Court House, Princeton, W. Va., on May 15th, 1918, at 8:15 p. m., President Fox, presiding.

The minutes of the last meeting were read and adopted, Dr. J. Vernon Grissom, of Princeton, W. Va. was elected to fellowship into this society.

Under clinical cases, Dr. S. R. Holcroyd presented a very interesting case, with enlarged glands of the neck. Also, with severe intestinal infections. The

point that Dr. Holoroyd was trying to bring out, as to whether or not the intestinal trouble was caused by the glanular trouble in the neck. This case was freely discussed and a good many guesses as to its probable diagnosis. It was decided to further investigate the case and report at next meeting. Under papers we were very fortunate to have with us Dr. J. Ross Hunter, of Huntington, who read us a paper on blood in the urine. Dr. Hunter's paper was very freely discussed and enjoyed by every one present. He dwelt upon the importance of careful diagnosis, as to the cause in all these cases. His paper will be published in the *Journal* at a later date.

Drs. Hunter and Fox gave us a very interesting talk and a report of the last meeting of the Medical Defense Board, in Washington, urging the importance for volunteers in Medical Reserve Corps. Lieutenant Slusser was present and also spoke along this line.

Being no further business, the society adjourned, to meet in Bluefield on the third Thursday in June, at 8 o'clock p. m. at the Chamber of Commerce rooms.

E. H. Thompson, Secretary.

State News

On May 23rd at New Martinsville, A. P. Fankhauser, chiropractor, was tried before a jury for practicing medicine without a license. The jury returned a verdict of "Guilty" and the court thereupon imposed a fine of $50.00 and costs of the trial, the defendant also to serve sixty days in jail and to do work on the public road. The defendant made application for an appeal to the Supreme Court and the sentence was suspended for sixty days for this purpose, and the defendant was given his liberty under bond of five hundred dollars, with promise that he would not attempt to practice in the state until the Court of Appeals gives its decision.

Dr. F. C. Hodges former house surgeon of the C. & O. hospital at Huntington has been commissioned a first lieutenant in the M. R. C. and has been ordered to Rockefeller Institute to do bacteriological research work.

Dr. Stuart McGuire of Richmond, Va. who was instrumental in organizing Base Hospital No. 45, has been ordered to Camp Lee. Dr. McGuire has offered his private hospital, St. Luke's, as a home for the girl's college, known as Westhampton College, as this institution will be used later for a base hospital for the treatment of wounded American soldiers returned to this country.

Dr. J. B. Kirk, who has been in Ocala, Florida in now re-located in Bluefield.

Dr. L. A. Jarrett formerly of Charleston is now at Gassaway for the practice of his profession.

Dr. S. L. Cherry of Clarksburg, who was called into active service in the M. R. C. a short time ago is at present in Washington, D. C. He expects to get permanent assignment soon.

Dr. C. M. Vest of the C & O. Hospital at Huntington has been commissioned a captain in the M. R. C. He will remain at the hospital until called into active service.

Dr. B. L. Hume who recently resigned as assistant superintendent of the Huntington State Hospital has reopened his office in the Day and Night Bank building in Huntington.

Dr. Julius C. Schultz, first lieutenant in the M. R. C. a former Huntington physician spent several days in that city. He is stationed at Camp Taylor, Louis-

ville, Ky. He delivered an address to the Cabell County Medical Society on the relation of the medical profession to the National Army.

Dr. J. K. Heatherman of War Eagle was a recent visitor in Huntington.

Mr. Pliny O. Clark, superintendent of the Ohio Valley General Hospital of Wheeling attended a conference in New York held under the auspices of the War Service Committee of the American Hospital Association on June 3rd.

Dr. C. M. Vaughn and wife of Fairmont were recent visitors in Huntington, enroute from Louisa, Ky. to their home. Dr. Vaughn has been commissioned a captain in the M. R. C. and enters into active service at once, being sent to Fort Oglethorpe, Ga.

Dr. F. O. Marple of Huntington, who recently spent some time in New York taking a special course in eye, ear, nose and throat work has gone into partnership with Dr. C. M. Hawes, the well known specialist of the same city.

Dr, B. W. Eakins, formerly of Carlisle is now located at Tams, W. Va.

Dr. Walter G. Swan, son of Dr. P. H. Swan of Huntington graduated from the Medical College of Louisville University in June. He will serve as an intern in an Indiana hospital until called to the colors, having enlisted in the M. R. C.

The following physicians from Huntington have applied for commissions in the M. R. C. K. C. Prichard, E. E. Rose, E. E. Shaffer, E. B. Gerlach, Guy Yost.

Dr. C. H. Scott of Huntington has accepted a position as assistant physician at the Huntington State Hospital.

Dr. J. Ross Hunter of Huntington attended the meeting of the A. M. A. at Chicago.

Dr. Frederick W. Bilzer of Mayberry, W. Va. has applied for a commission in the M. R. C.

Dr. T. W. Moore, of Huntington read a paper before one of the meetings of the A. M. A. which met in Chicago. The subject was, "The Present Status of the Operative Treatment of Chronic Frontal Sinustitis."

Dr. L. V. Guthrie, superintendent of the Huntington State Hospital attended the meeting of the American Medico-Psychological Association held in Chicago in June. Later he was in attendance at the meeting of the Federated Charities which held its session in Clarksburg, W. Va.

Dr. R. J. Hersey of Wheeling was a recent visitor in Charleston and Huntington.

Dr. John A. Davis of Bedford City, Va. is now located at Mammoth, W. Va.

Dr. Alexis Carrel of the Rockefeller Institute, New York, has been promoted by the French Government to the rank of commander of the Legion of Honor for his medical services during the war.

Reorganization of the staff of the Chesapeake & Ohio Hospital, effective for the duration of the war was announced yesterday. The changes are as follows:

Dr. C. R. Enslow, advisory surgeon, to be surgeon in charge, vice Dr. R. N. Wilkinson, Lieutenant, M. R. C., National Army, called to colors July 1.

Dr. J. Boyce Taylor, Big Creek, W. Va., house physician, succeeding Dr. F. C. Hodges, Lieutenant, M. R. C., National Army, called to colors.

Dr. Taylor is eventually to succeed Dr. C. M. Vest, Captain, M. R. C., National Army, who will continue his

duties as internist at the hospital here until the call comes for him to report for duty.

In making the announcement of the reorganization of the hospital staff for the duration of the war, representatives of the chief surgeon called attention to the fact that he was particular about arranging that none of the new men should be liable to call for army service.

Dr. Enslow is one of the veteran surgeons of the railroad company. In recent years he has not been as active in the work as in the past. This fact was due to impaired health, but he is now much improved and welcomes the opportunity to get back into the harness, especially as this permits him to be of direct service to the government in the prosecution of its war program.

Dr. Taylor is not a stranger in Huntington. He practiced here a number of years ago and has many friends in the city. Like Dr. Enslow, his years have unfitted him for army life.

Hundred Percent Enlistment

A one hundred percent enlistment in the Medical Reserve Corps is the record of the active staff at this hospital. Dr. James Van Pelt, who preceded Dr. Hodges as house surgeon, was the first to go. Now Dr. Hodges has gone and Dr. Wilkinson and Dr. Vest are going.

Dr. J. Ross Hunter is in Princeton, W. Va., where he last night delivered a lecture before the Mercer County Medical Association.

Book Reviews

Infant Feeding. By Clifford G. Grulee, A. M. M. D., Assistant Professor of Pediatrics at Rush Medical College; Attending Pediatrician to Presbyterian Hospital, Chicago. Third edition; Thouroughly Revised. Octavo of 326 pages, illustrated. W. B. Saunders Company, Philadelphia and London. 1917. Cloth $3.25 net.

This text book by Dr. Grulee has reached its third edition, thus evidencing its popularity with the profession. Dr. Grulee is inclined to be ultra scientific and has a decided leaning towards Continental methods.

The Medical Clinics of North America. Vol 1, Boston Number, No. 4, Jan. 1918. A bi-monthly, published by W. B. Saunders Company, Philadelphia and London. Price per year $10.00 paper. $14.00 cloth.

This is one of the best publications of its class. There are twenty contributors to this number. Not a dull clinic in the whole lot. Dr. Christian's clinic on complete heart block, partial heart block, Digitalis heart block in Airicnar Fibrillation and chronic myocarditis is of special interest. In the clinics of Dr. Joslin it will be noticed that he is opposed to the use of alkaline medication for acidosis in cases of Sévere Diabetes, and cites as a basis for his objections a collection of fifteen cases other-wise successfully treated. This is in direct opposition to the course advised by other eminent authorities who also obtain excellent results. Dr. Joslin lays considerable stress on analyses to ascertain the blood fat content which is something comparatively new but in the light of late research seems to be of great importance as an aid in directing treatment. Vincent's Angina is taken up in the clinic of Dr. Barnes from which clinic may be obtained a great deal of information upon what was formerly considered a very rare and occult condition. Should succeeding numbers prove to be equally interesting and in-

structive they will well repay the investment of the price of subscription.

A Text-Book of the Practice of Medicine by James M. Anders, M. D., Ph. D., LLD., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College Graduate School, University of Pennsylvania, Thirteenth Edition Thoroughly Revised, with the assistance of John H. Musser, Jr., M. D., Associate in Medicine, University of Pennsylvania. Octavo 1239 pages, fully illustrated.

Philadelphia and London: W. B. Saunders Company, 1917. Cloth $6.00 net; Half Morocco, net $7.50.

This the thirteenth edition of this well known book comes to us in a thoroughly revised form with much up-to date mater of interest added. Both practitioner and student will find their needs well provided for in a practical way. Diagnosis with differential diagnosis made and exemplified in comparative columns of signs make these matters plain. Symptomatology, etiology and treatment are taken up, concisely and clearly set forth. Treatment of tetanus, acidosis and asthma, etiology of aortic incompetency, functional tests of hepatic insufficiency, rat-bite fever, Pyorrhoea alveolaris, Prophylactic vaccinations, and a section on diseases of the nervous system will be found amongst the most important added matter of special interest to the general practitioner.

American Illustrated Medical Dictionary (Dorland). A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology and kindred branches: Edited by W. A. Newman Dorland, M. D. large octavo of 1179 pages with 331 illustrations, 119 in colors.

This is one of the very best books of the dictionary kind. The words are not only correctly spelled but the accents are correctly marked and the pronunciation of each word given. This is the ninth enlarged and revised edition. Many new words and terms are included. Among other features adding much to its value are tables of dosage and the therapeutic uses of various drugs, table of poisons with their symptoms in poisonous doses and antidotes, anatomic tables, reactions, standing and fixing methods, tables of the metric system and comparative values of different weights and measures and other items of interest and practical value thus making almost a medical library within itself. It should be in the hands of every medical student and on the library table of the practitioner for ready reference. W. B. Saunders Company, Philadelphia and London 1917. Flexible leather, $5.00 net; Thumb index, 5.50 net.

Material Medica, Pharmacology, Therapeutics and prescription writing.

For students and practitioners, By Walter A. Bastedo, Ph. G., M. D., Assistant Professor of Clinical Medicine Columbia University. Second Edition, reset. 654 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1918. Cloth $4.00 net.

Worthy of the favorable reception it receives as was the first edition of this work, this the second, reset is even more so. It is up to date and is in conformity with the latest edition of the Pharmacopeia. It has included and discussed a number of the newer methods of treatment and remedies such as the Carrel-Dakin treatment of wounds, paper-

vine, ethlhydrocuprene, etc. For the student's use the book is very much to be commended on account of the clearness and conciseness of its statements.

International Clinics. Vol. 1. Twenty eight series, 1918. Price $2.50.

This is a quarterly of illustrated lectures and especially prepared original articles on Treatment, Surgery, Medicine, Neurology, Paediatrics, Obstetrics, Gynaecology, Orthopaedrics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world.

Edited by H. R. M. Landis, M. D., Philadelphia, U. S. A., with the collaboration of Chas. H. Mayo, M. D., Rochester. Wm. Osler, Bart., M. D., F. R. S., Oxford. Rupert Blue, M. D., Washington, D. C. Frank Billings, M. D., Chicago. John G. Clark, M. D., Philadelphia. A. McPearson, M. D., Toronto. James J. Walsh, M. D., New York. J. W. Ballantyne, M. D., Edinburg. Chas. Greene Cumston, M. D., Geneva. Arthur F. Beifield, M. D., Chicago. Richard Kretz, M. D., Vienna with correspondents in Montreal, London, Paris, Berlin. Vienna, Leipsig, and Geneva. J. Lippincott Company, Philadelphia and oLndon.

This is an especially interesting number. The clinics are all good and the general review of medicine for 1917 which concludes the volume is alone well worth the price of the book.

New and Non-official Remedies, 1918, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1918. Cloth price postpaid, $1. Pp. 452 x26. Chicago: American Medical Association, 1918.

This annual should be in the office of every physician. It lists and describes all those proprietary remedies which the Council on Pharmacy and Chemistry has examined and found worthy of the confidence of the medical profession; that is, articles the composition of which is disclosed, which are exploited truthfully and which give promise of some probable therapeutic value. The description of each article aims to furnish a statement of its therapeutic value and uses, its dosage and method of administration as well as tests for the determination of its identity and quality. Articles of similar composition are grouped together and in most cases each group is accompanied by a general article which compares the members of a group with each other and with the established drugs which they are intended to replace. The description of the individual articles and the general discussions are written by experts and furnish information of a trustworthiness unsurpassed by any other publication. The book is especially valuable to the busy physician who desires a concise and up-to-date discussion of such subjects as digitalis therapy, the newer solution for wound sterilizations, iron therapy, food for diabetics, the value of sour milk therapy and of the bulgarian bacillus, the use of radium externally and internally, of arsphenamine (salvarsan, arsenobenzol, diarsenol) and neoarsphenamine (neosalvarsan, neodiarsenol), of local anesthetics, and other advances in therapeutics.

In addition to this annual issue of the book, supplements are sent from time to time to purchasers. With this volume for ready reference, the physician

will be able to determine which of the proprietary remedies that are brought to his notice deserve serious consideration. At least he will be justified to subject to close scrutiny those which have not met the requirements for acceptance for New and Non-official Remedies.

The book is sent, postpaid, for one dollar. Address the American Medical Association, 5335 North Dearborn Street, Chicago.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1917. Cloth price, postpaid, 50 cents. Pp. 169. Chicago: American Medical Association, 1918.

This volume contains the reports of the Council which were adopted and authorized for publication during 1917. It includes reports of the Council previously published in *The Journal of the American Medical Association* and also reports which, because of their highly technical character or of their lesser importance, were not published in *the Journal.*

In this volume the Council discusses the articles which were examined and found to be in conflict with the rules for admission to New and Non-official Remedies. Among these reports are discussions of such widely advertised proprietaries as Corpora Lutea (Soluble Extract), Wheeler's Tissue Phosphates, The Russell Emulsion and The Russell Prepared Green Bone, Trimethol, Eskay's Neuro Phosphates, K-Y Lubricating Jelly, Ziratol, Hepatico Tablets, Hemo-Therapin, Venosal, Surgodine and Kalak Water. A report on Iodeol and Iodagol cover 51 pages and illustrates the exhaustive investigation which the Council is often obliged to make of proprietary articles. Similarly illustrative of the Council's thoroughness is the clinical study of Biniodol, a solution of mercuric iodid in oil, and the investigation of Secretin-Beveridge, made for the Council by the physiologist, Professor Carlson, of the University of Chicago. The volume also contains reports which explain why certain preparations, such as Alcresta Ipecac tablets, the German-made diologic products and antistaphylococcus serum, which were described in the last edition of New and Non-official Remedies, are not contained in the current 1918 edition. Those who wish to be informed in regard to proprietary remedies should have both the annual Council Reports and New and Non-official Remedies.

Diseases of Women.

By Harry Sturgeon Crossen, M. D., F. A. C. S. Associate in Gynecology, Washington University School, and Associate Gynecologist to the Barnes Hospital; Gynecologist to St. Lukes Hospital, Missouri Baptist Sanitarium and St. Louis Mullanphy Hospital; Fellow of the American Gynecological Society and of the American Association of Obstetricians and Gynecologists.

Fourth Edition revised and enlarged with 800 engavings. Price $7.50. C. V. Mosby Company, St. Louis. 1917.

This edition of a valuable work has been re-written and reset and a number of new illustrations have been added thus enlarging the work until it now contains 1194 pages. This has always been a popular work and its popularity will be increased when the enhanced value of the work from its arrangement and up-to-date matter is noted. One very attractive and useful feature to the general practitioner is the careful details in methods of diagnosis and treatment.

"The Internal Secretions—Their Phy-

siology and Application to Pathology."

By E. Gley, M. D. Member of the Academy of Medicine of Paris; Professor of Physiology in the College of France, etc.

Translated from the French and edited by Maurice Fishberg, M. D. Clinical professor of Medicine, New York University and Bellevue Hospital Medical College; Attending Physician Montefoir Home and Hospital for Chronic Diseases. Authorized translation.

Paul B. Hoeber, New York 1917. Price $2.00.

This book is a very clear and concise exposition of what we think we know of the pathology and physiology of the endocrine glands. The difference between the two kinds of secretions is explained in the introduction. There can be no manner of doubt as to the highly important part these glands play in the body function, and our present knowledge and the use to which it may be put is clearly expressed in its pages.

"An introduction to the History of Medicine with Medical Chronology, Suggestions for Study and Biological Data". By Fielding H. Garrison, A. B. A. M., Principal Assistant Librarian, Surgeon General's Office, Washington, D. C.

Second edition, revised and enlarged.

Philadelphia and London, W. B. Saunders Co. 1917. Price cloth $6.50 net; Half Morroco $8.00 net.

We have received this the second edition of Garrison's work on the History of Medicine. While its value to the practitioner from the standpoint of material value may not be apparent, it will be generally conceded that every member of a profession should as a matter of general knowledge and culture, know something of the history of his profession. This book will enable one through the contents of the book itself and the "hints on the study of medical history" together with the bibliography found in the appendices to go as deeply into the subject matter as one may wish.

Medicine

The Control of a Smallpox Epidemic by Vaccination.—A. G. Gould (Boston Medical and Surgerical Journal, March 21, 1918) reports an epidemic that broke out in a factory having 15,000 employees, About 5,000 were found to be not vaccinated. These were vaccinated in November. The number of cases of smallpox that had appeared were: in September, 2; in October, 10; in November, 32. After the vaccination 3 cases of varioloid developed in December, and no smallpox since. Gould's experience leads him to conclude that: Smallpox occurs, almost without exception, only in those not protected by vaccination; vaccination protects longer than the assigned seven years.

Toxicity of Emetine Hydrochloride.—J. Gugliemetti (Presse medical, January 24, 1918) states that the toxcity of emetine hydrochloride may be manifested in three different grades; Massive or immediate toxicity, with death within twenty-four hours. In the dog 0.005 to 0.0075 gram of the salt per kilogram of animal is regularly fatal. Deferred or mediate toxicity, death occuring in from seven to twelve days after administration. Cumulative toxicity. Continued daily administration to a dog of one tenth the dose — 0.00056 gram per kilogram—which is lethal in twenty-four hours—0.005 per kilogram — may ultimately cause death. In the adult human subject the effects of massive toxicity are not met with, but fatal in-

toxication is to be apprehended from a dose of 0.6 gram or upward. Death is probably certain after a single dose of 1.2 gram. The intravenous route of administration should not be employed. Evidences of cumulative toxicity have been demonstrated in many reported cases. To be on the safe side, 0.15 gram should be injected daily on not more than five or six consecutive days; nor 0.1 gram for more than eight or ten days, nor 0.05 gram for more than fiifteen or twenty days. Long intervals between esries of injections should be allowed.

The Mentally Defective Soldier.

For the first time in the history of warfare mental hygiene, as practised among the soldiers, has been given the prominence it deserves, and, profiting by the experience of England and France in the present war the Surgeon General was impelled to inaugurate an elaborate organization, both in numbers and in plan, to take care of any mental disturbances detected in the camps or among soldiers during the war. This is a distinct innovation in medical army work, for the subjects of mental hygiene and of mental and nervous disease in general as occuring among soldiers in war time were for many reasons either slightly treated, or neglected altogether.

The outlook for those affected mentally during the war is rather brighter than among those in civil live, and Lieutenant Colonel Pearce Bailey (American Journal of Public Health, January, 1918) finds the rate of recovery verying up to seventy per cent. (Doctor White's statistics of the Spanish war), as contrasted with the twenty per cent. or twenty-five per cent. as found among the civilians. During peace the discharge rate from the army of those affected with various psychoses is three men in a thousand, as compared with six or even ten in a thousand during the war, especially in expeditionary wars, that is, wars in foreign countries, when the ratio rises as high as fifty per thousand, as happened in the German expeditionary forces in the Boxer campaign. Here evidently homesickness is an important contributory factor. Instantly in the most frequent cause for discharge in the army, even more so than tuberculosis, contrary to the accepted belief.

The mental hygiene work is conducted by a taff of qualified men, who responded eagerly to Surgeon General Gorgas's appeal for specialists issued in April and May of last year. Among cases they handle are, first of all, the mental defectives, whose conduct in the army may easily be compared to the behavior of backward and feebleminded children in school. Their mentality is passed upon by new and rapid tests especially adapted to the urgency of the situation. The weeding out of these "stupids" is a matter of great importance in the morale of the army during war, for many a case of apparent cowardice, for which the unfortunate forfeits his life, is to be ascribed to feeblemindedness, as the English have found in their experience during this war. Another class is the pampered son and the ne'er-do-well, subjects without stamina or basis of character or mind; the presence of such is of no value in an army, and. once found, they should be gotten rid of. Still another type is the individual who cannot possibly be made to fit within the rigid frame of the collective discipline of an army: divorced from his habitual way of doing things, unable to orient himself among the new surroundings for lack of adaptability, he soon collapses under the strain and excitement of war horrors,

and thus becomes a burden on the army. It is especially important to keep in mind that all such may pass a perfect physical examination, as presumably very desirable soldiers, and this notwithstanding may be properly classified among the above enumerated cases. Even in the officers' training camps, where are gathered some of the finest specimens of young manhood, among candidates combining the most important qualifications of the successful soldier, the ability to obey and the quality of initiative and independence whenever the occasion demands, there are between one per cent. to two per cent. nervously unfit for war.

Who will gainsay that we will have a very wide field indeed to work upon!

Ed. N. Y. Med. Jour., 5-4-18.

Inexpensive Treatment of Psoriasis.—H. Gougerot (Paris medical, February 9, 1918- lays stress on the frequence of a bacterial epidermitis which strikingly resembles psoriasis in all its different aspects. Impetigo and other similarly caused conditions may pass into this form of pseudopsoriasis. Mistaking the latter for psoriasis is not a serious matter, for the treatment of psoriasis by reducing agents will also overcome it· Recovery is more prompt, however, if the treatment for pyogenic conditions is applied, viz., the use of silver nitrate and yellow oxide ointment. Gougerot describes in detail the measure he has found most serviceable in hospital cases, among soldiers and the poorer clases. He praises Bory's new treatment of psoriasis by intramuscular injections of sulphur in oil. He adds to it, however, the administration of sulphur by mouth and other routes. Thus, pills of 0.5 gram of sulphur and 0.15 gram of extract of krameria are given by mouth to the number of two to sixteen a day, according to intestinal tolerance. Inunction with petrolatum containing ten per cent. of sulphur is also employed. Sulphur, while probably the most efficacious internal treatment known, is not constant in its action and must be supplemented by external measures, e. g.,

℞ Camphorae ..... 1 gram;
Sulphuris loti..... ..... 2 to 8 grams;
Acidi salicylici ..... 1 to 4 grams;
Olei cadini ..... 10 to 20 grams;
Olei amygalae dulcis 20 to 10 grams;
Talci.....)
Zinc oxidi) ana ..... 20 grams.
M. et fac pastam.

This is to be applied over the whole body morning and evening, except over the scalp and the small area where a strong ointment is to be used· Ten per cent. sulphur in petrolatum is cleaner and cheaper than the above, though less effectual. Over a single small area a strong reducing ointment is used, e. g.,

℞ Acidi salicylici ..... 10 grams;
Olei cadini .....)
Zinci oxidi .....) ana ..... 20 grams;
Chrysarobini)
Petrolati liquid)
Saponis nigri) ana ..... 25 grams.
M. et fac unguentum.

Unless irritation results, the strong ointment is applied daily for six to twelve days, then used over another small area, the sulphur paste being meanwhile employed continuously over the whole body.

Mouth Infection.—Osborne in an interesting article in New York Medical Journal (Mar. 2, 1918) declares that these mouth infections can cause a disturbance of the suprarenal secretion as seems to be shown by many instances of greatly increased blood pressure without any evidence of arteriosclerosis or any

apparent kidney defect. The suprarenal glands may also be inhibited in their activity as well as stimulated, as very many instances of low blood pressure occur coincidently with mouth infection. Whether infection in the mouth interferes with the pancreas or with the suprarenals, or with some other factor in carbohydrate metabolism, it is a fact that many instances of glycosuria are associated with such infection. This glycosuria has not polyuria or excessive thirst as symptoms and is generally readily stopped on a diet free from starch. It is not often necessary to place the patient on a starvation diet to eradicate the sugar in the urine; in other words, a real diabetes mellitus does not seem to be present. Patients with glycosuria and with infection are at times cured of the former when the mouth is made clean.

As we know more and more of the type of disturbance called cardiovascular renal disease, as we have long ago learned of the irritation to arteries and kidneys by toxins absorbed from the intestines, and as we recognize the danger from irritants caused by preserved foods, we must now recognize the possibility, if not the probability, of chronic mouth infection causing the absorption of sufficient toxins or irritants to produce arteriosclerosis and chronic nephritis. We must recognize the enormous increase in heart affections and in blood-vessel disease that is shown by the statistics of the last twenty-five years, and this has been the period in which more crowns and bridges have been placed in the mouths of the civilized human race. Consequently, is it too much to assume that many of the functional disturbances of the heart and much of the chronic myocarditis may be due to infected mouths, as we do well know that serious endocarditis can be caused by some of these mouth germs?

Surgery

Eisendrath, D. N.: The Silent Com-Con-Duct Stone. *Med. and Surg.*, 1917, i, 507.

Eisendrath calls attention to the fact, not generally appreciated, that calculi may be present in hepatic or common bile ducts, without clinical or palpatory evidence. Following the suggestions of Kehr, the author has, in the past four years, explored these ducts in 36 cases in which palpation was negative. In 12 calculi were found. Two of these had been operated upon previously by other surgeons.

Of the four indications given by Kehr, three have seemed to the author of special importance in the order named: (1) the presence of many small calculi in the gall-bladder or cystic duct; (2) an enlarged, thick-walled common duct; (3) the presence of chills, fever, or icterus. To these he adds a fourth, recurrence of plain or symptoms of cholangitis (chills, fever, etc.) after operations, such as drainage or removal of the gall-bladder, or even after either of these combined with choledochostomy.

He has found that the chief indication for opening the common duct, when palpation of the ducts is negative, is the presence of many small calculi in the gall-bladder.

In the nine cases not previously operated upon, in which stone was found on exploration of the duct, but which were negative to palpation, the symptoms were as follows:

1. Pain—not to be distinguished from that due to the gall-bladder.

2. Icterus—slight and only during attacks of pain, in three cases.

3. Chills and fever—in two cases. The common duct varied in size from a

little finger to a thumb. The pancreas was hard and enlarged in three cases.

The author believes that systematic exploration of the common and hepatic ducts does not increase the mortality of the operation. Symptoms pointing to common-duct calculi may be absent and silent calculi may escape palpation, accordingly the surgeon should be prepared to make a thorough exploration of the bile passages if one or more of the four indications given are present.

It is his practice at the present time to open the gall-bladder and, after the calculi have been taken out, to use it as a tractor while the common duct is opened in its supraduodenal portion. After the common duct has been explored, the calculi removed and a drain inserted, a cholecystectomy is performed as the last step in suitable cases.

RANSOHOFF, J.: SOME OBSERVATIONS ON BRAIN SURGERY. *Interest. M. J.*, 1917, xxiv, 343.

The first step of brain surgery—trephining—is older than written history, but real work in this branch of medicine is less than fifty years old. Trephining *per se* is practically without risk, but the later development of paralysis, spurious meningocele, epilepsy, and abscess are always to be considered. To the general surgeon, fractures with their concomitant brain injuries will always continue the majority of cases in which operation is indicated. Here X-ray gives an assured estimate as to the damage to the skull, while a lumbar puncture will give an idea of the damage to the brain. Many basal skull fractures are doomed from the moment of the accident. In about 200 cases seen in the Cincinnati General Hospital, 37 per cent. of the deaths occurred in less than six hours, and 56 per cent. in the first twelve hours. The author can recall but two cases in which he believes that an operation foiled death in cases which appeared hopeless. In cases living longer, a spinal puncture will often accomplish all that a decompression will, and is destined to take its place in many instances, as it relieves the oedema when the bleeding has stopped. Decompression is indicated in all cases in which the patients become progressively or suddenly worse, showing signs of increased intracranial pressure. The rule that localized brain injuries with fracture should be operated upon stands.

From experience along the western front in the present European War, it appears that the brain substance is not easily, or rapidly infected. The consensus of opinion of the war surgeons is that none but the simplest operations should be done except at a base hospital. If a trephining is to be done, it should be some distance from the injury, and the latter, if not too large, excised. Gauze drainage is to be entirely avoided, and where drainage is absolutely necessary, it should be done with guttapercha or strands of silkworm. Primarly union is to be sought for here as elsewhere.

A great many brain abscesses are best treated by the otologist. There are a number of cases of this type, however, coming to the general surgeon. While the results are more favorably than formerly, they are still anything but encouraging, and the patient is often left with hemiplegia, the subject of convulsions or of mental defects.

Brain tumors as nothing else tax the diagnostic acumen of the surgeon. In only 40 per cent of the cases is the tumor found at operation. This is due to the silent process in some instances, and the localizing symptoms, if present are slight and difficult of clear interpre-

tation. Gliomata often so resemble the normal brain substance that although perfectly exposed they may not be recognized. Of the three subcortical tumors that the author has been able to remove, two died of a recurrence within a year. The mortality from operation is high, although Cushing reports 136 operations with only four deaths. Operations upon the cerebellum which were considered unjustifiable a little over a decade ago have been made quite as safe as pretentorial tumor operations, due partly to the fact that a large proportion of these tumors have turned out to be cysts requiring only drainage, and partly because decompression promptly relieves the most distressing symptoms. Deaths due to respiratory failure must not be forgotten in this type of cases.

Right temporal decompresions as a routine are bad practice, for in cerebellar growths death may occur from dislocation of the brain, just as it occurs occasionally in the reverse direction from spinal puncture. McGuire's method of removing a large bone-flap over the occiput appeals to the author.

In regard to epilepsy of idiopathic origin, the results are not promising enough to warrant surgical procedure, although this seems to be a more logical point of attack than the short-circuiting operation of the intestinal or the removal of the ovaries as formerly and still occasionally practiced.

Diagnosis of Cancer of the Breast.—J. Shelton Horsley (Virginia Medical Monthly, January, 1918) emphasizes the fact that cancer is not painful in its early stages. A benign breast tumor is more likely to cause pain than is early cancer. After ulceration has set in, with secondary infection or pressure on nerves, pain begins, but operation is then often too late. If ulceration, retraction of the nipple, and glandular involvement could be eliminated from text books as symptoms of mammary cancer, the lives of hundreds of women would be saved every year. There is no one positive early sign, but one may build up the evidence and make a probable diagnosis. The typical early cancer occurs in a woman past thirty-five years of age and begins as a single lump. Usually limitation of motion can be detected upon careful observation. The skin may not move freely over the growth or the lump itself may not move freely in the glandular tissue, though there is always some motion. Picking up the skin over the tumor sometimes shows points of attachment to the skin. The affected breast often does not hang as low as the unaffected breast. These symptoms, if present, amply justify immediate operation. If there is doubt, the patient should be prepared for a radical operation and an incision made in the growth. As a rule, inspection and palpation will then determine the diagnosis. Cancer usually feels hard, and has no capsule to retract upon incision as does a benign tumor. If there is still some doubt, a frozen section should be made and reported upon at once. The incision should be thoroughly cauterized immediately after removal of the sections, and if the latter are positive, the radical operation proceeded with at once.

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PRACTICAL POINTS IN ETHERIZATION.

Read at Fiftieth Annual Meething, Fairmont, October, 1917.

T. Henry Becker, M. D.
Bluefield, W. Va.

Most laymen and even most physicians consider the anesthetizing of a patient a trivial procedure, and that it requires no especial skill on the part of the person called on to do this part of the operation. As a usual thing when a choice is made, and an anesthetist chosen, the danger is not considered great and perhaps an unsafe man is chosen to give the anesthetic and thus to take the life of the patient in hands. As a matteer of fact the patient and friends of the family will desire and indeed often request that the family physician give the anesthetic. He may be a man who gives an anesthetic now and then, but often he has not had opportunity to administer it to a surgical degree once a year. Could he be a safe man with an anesthetic, no matter how expert he had been in the past? He has lost his practical tact and would not feel at home at the "head of the table."

An anesthetist who has had much experience soon finds that there are few or no "cut and dried" rules that can be followed. No two patients have babies alike and neither do any two patients take ether alike. The same person does not take it the same twice. There are numbers and numbers of practical points that may be observed in giving ether, and I believe that one has to pay especial attention at all times to do his patient justice as to risk of life. (I should like to know how Crawford W. Long of Georgia in 1842 and Morton in Massachusetts General Hospital in 1846 gave ether?)

There are a few things which have to be taken into consideration before starting an anesthetic. In what frame of mind is your patient? What kind of a subject have you One soon learns to size up his subject.

Never tell any patient he has taken

a bad anesthetic. There is an element of fear and excitement that attends every patient when he lies down on the operating table and this excitement is magnified into a positive fright if the patient has previously been told that he is a bad subject for an anesthetic. Indeed, I think from my experience with a few of this class that it is almost a crime for any physician or nurse to impart this information. Again some patient will tell you "doctor so and so said I could never take an anesthetic." Now, whether doctor so and so thought this or not, unless he was to do the operating then and there or refuse to operate on this account he should not tell them this. At this place I want to say that I believe bystanders, whether relatives or guests, I do not mean physicians, are handicaps also to the person on the table, especially if they should do badly under the anesthetic. I mean in other words the anesthetist cannot do his best and is apt to become bothered and nervous and thereby does not do himself or the patient justice. The bystander cannot understand that by certain manipulations one is trying to do his best for the welfare of the patient. They go away with a distorted and disagreeable picture in mind. They tell others and later the patient himself how near he came dying, how awfully bad he breathed and how rough he was handled and mistreated. Your stage of excitement is governed almost directly by these points.

All of us present learned from books the different stages of Anesthesia:

First—Light Anesthesia.
Second—Stage of excitement.
Third—Surgical anesthesia.
Fourth—Danger zone.

To modify some and do away with other of these stages is what concerns us most, when wanting a smooth, safe anesthetic. The first thing is to reduce, or what is better if possible do away with the unpleasant and dangerous stage of excitement. So handle your patient that he never enters the danger zone. It is said that the first stage should last two or three minutes. The first way to reduce excitement and prevent his nearing the danger zone is to lengthen the first stage. Start dropping, not pouring ether, solwly with cone well above nose, try to gain the confidence of your subject by talking to him in an even tone of voice. Do not ask him questions that require answers. Urge him not to talk. One cannot talk and breathe at the same time, Ask him to breathe normally not to take long breaths. Say for instance that the patient should be talking, ether is being dropped slowly all the time. Then he takes a breath, the quality of ether vapor has accumulated and the consequence is he gets enough to irritate or strangle and begins to hold his breath and struggle. You have now started, by thus irritating your patient, the second or dangerous disagreeable stage of excitement. The very thing in my opinion that could be avoided, in the majority of cases, if the patient is properly carried through the first stage. Do not allow anyone standing by to tell patient to take long deep breaths. Regular or normal are better for his comfort. Have him to swallow when feeling oppressed, ask him to shake head if ether seems too strong then help him by rising cone slightly. One can notice that his patient is becoming uneasy and oppressed or attempting to cough before he actually does. Ask him to swallow not to cough. Use some sugestion, tell him he does not have to cough, to shake his head oppressive — always raise cone,

give a little air to let him know you are watching his needs, thereby his confidence increases. Do not let nurse or anyone else touch patient abruptly in first stage of anesthesia. This may be taken by him as a gross insult and may upset a quite breathing, settled person into a restless fighting one.

A very important thing is never to hurry your patient. One person may go under the influence of ether quickly while the next requires more time and patience to get him asleep quietly. Give as much as he can gradually take without showing signs of discomfort. Patients are very grateful to the anesthetist who does not smother them. A little time in the first stage may save lots of time and danger in the end. I truly believe that in most cases the way they go to sleep governs the whole anesthetic. Never allow an operator to hurry you. The welfare of the patient as to the results of the anesthetic rests entirely on the anesthetist, not the operator. Upon one occasion I was to give an anesthetic for two physicians, one of these seemed in quite a hurry and suggested that I could save time and could get the patient asleep in just a "jiffy" by giving him a few drops of chloroform. The case chanced to be a "Tonsilectomy". My answer to him was that when I gave chloroform to a case of this nature, unless especially indicated, I hoped that some one would send me "up with the feeble minded". I consider giving an anesthetic for a tonsilectomy usually requires more skill and time than almost any other operation. Before the operation can begin the patient must be thoroughly asleep in order to have a perfectly quiet throat. To do this the patient has to be brought at times nearer the danger zone and nearer the point of being knocked out than in most other cases.

When using the continuous open drop method of administering ether, which I believe we all agree is the safest and best, one has no time to gaze about or take a nap, nothing to do but drop ether slow or fast as the case may require. The slightest neglect may cause your patient to do badly and require hard work to get him exactly back to the right stage again.

"When I consider air of more importance than ether". I do not mean by this the old axiom "When in doubt give air". The patient may be in no danger as to life or in the danger zone, but breathing is not good, but panting, irregular, stertorous or rapid. Now it seems the most plausible thing to keep giving ether and get him quiet. Ether will not do this without danger. A little air by raising the cone, then slowly dropping ether again often quiets him into regular breathing. Take a hard subject who passes by tedious work into seemingly the surgical stage without much excitement, when you think him asleep and ready for the knife he surprises you by beginning to cough cessantly—now as before more ether suggests itself, the surgeon looks in a hurry, you know your object should be ready. The drop method gets too slow. Pour on great quantities of ether and he not only coughs but holds his breath and gets blue. By raising cone take time enough to give his a few breaths of fresh air. If he is from under the influence far enough suggest to him that he does not have to cough, drop on slowly a little ether, more air and then a little ether and so on. Many times the patient is soon asleep and breathing quietly, cough gone. By a little air used at the proper time you have quieted a troublesome patient and without half the dan-

ger of knocking him out that you would have had by increasing the ether to stop the cough.

Tremor of the muscles known as ether Tremor or Clonic Contractions of Muscles, often become bothersome. In these cases a little air will go farther to relax them and ether begun slowly gets them further under and relaxed. The nearest I ever came to killing a patient, a stout, brawny, muscular man was just in this way. He had an exaggerated muscular tremor. I pushed the ether and he became rigid. (This was sometime ago when I thought I should push ether instead of air.) I continued to push ether and gave no air, but rather shut out as much as I could. Finally the rigidity changed to relaxation, his breathing became quiet as if he was doing nicely, breathing became more quiet and more shallow while circulation seemed to remain good. The consequences were I had knocked my man out and he had to be given artificial respiration to resuscitate him. From experience with lots of similar cases I am now sure that air would have been the proper thing for him instead of pushing ether. (Just at this point would like to say with an apology and not in a bragging way, that in my experience with ether this is the second case where my patient had to be given artificial means.) The first case was a negro with a dislocated hip and I tried to thoroughly relax him so the dislocation could be more easily reduced. I took him just a little too far and he had to be pumped only for a short time to be back in good shape.

Why Help is Needed—In giving an anesthetic one should have one or perhaps two assistants to control the patient if necessary. When a patient is quiet and easily controlled he should not be touched, but if he should move, a slight restraint by taking hold of his arms or his chest will suffice to cause him to pass quietly into sleep instead of getting a start by moving and then fighting. I have a scar on one of my forearms now which I received at the Miners Hospital for neglect of just such reasons. This patient got clear off of the operating table and would have perhaps jumped through a plate glass window had he not have been thrown flat of his back on the floor and the anesthetic continued in this ungraceful position until he was relaxed for the operating table. Would this not have been a pretty scene for bystanders or friends? This would not have occurred if the anesthetist had had proped assistance. I think it best that a safety strap be placed just below the hips so as to hold patient flat on back and prevent them from turning on side. Also two straps placed about wrists help to alleviate trouble should it occur to them to scrap, no matter how easy they are handled. Some patients seriously object to being tied down on the table, so some judgment has to be exercised about this point also, to alleviate fright.

Position of Patient on Table—Empyematous—Brain and Skull and Heart cases take a better anesthetic when head and shoulders are elevated. Fat or robust patients do not stand the Trendelenberg position well. With a patient in this position you notice a peculiar ashy appearance about ears especially, and other circulatory disturbances occur. They had better be put on the level as soon as possible, to avoid danger even if the operation is inconvenient to a slight degree.

Obstruction to Air Passageway—A cause of shock. Sometimes the alae of the nose seem to close with each attempt to inspire. This is especially apt to

occur in the highly nervous female. When this does occur it should not be treated lightly but the jaw should be manipulated so they may inspire through the mouth. Two small rubber tubes may be used but I have never found this necessary. Again a patient may seem to be trying to blow out through closed lips but without success. This is also considered a shock. The jaw should be manipulated, thumbs placed between lips or the end of a towel used to hold lips apart. I simply mention the latter conditions so that they may be noticed and corrected instead of doing nothing but push ether to danger point. At the hospital with which I am connected we have had but very few cases of what could be termed Ether Pneumonia. I will not discuss this anesthetic phase but only say from experience in what cases I always fear such a dangerous outcome. First, where patients have to be in the Trendelberg position for sometime. Second, where they have a great quantity of foam or mocous secretion manufactured in bronchial tract. Third, those who are operated on for obstruction of bowel and seem to without even retching pass great quantities of fecal like material by mouth. Fourth, those who from no especial cause seem to want to stay very blue while taking the anesthetic. Some authorities, I believe, say that unless Pneumonia occurs within the first thirty-six hours it is not due to ether. All the cases of pneumonia I have seen follow ether have been one of the previously mentioned class. It would be useless to mention patients who have acute colds as another class, since with such condition present ether is strictly contraindicated.

According to authorities Fatal Reflex Failures are more apt to occur in the light stages than in full unconsciousness; that is death from respiratory and circulatory failure from rigidity of muscles, certain manipulations of patient by the operator-dilatation of sphincter and the like.

At times when a patient is under surgical anesthesia and doing nicely and breathing quietly, the surgeon passes his hand up about diaphragm or gall bladder, the patient ceases breathing at once. It is best to always give air here. Take cone completely off of the face until you see that the patient begins breathing. Do not pour on ether and have an overdose ready for him when he finally takes a breath. When the sphincter muscle is dilated in rectal cases, also cases of Intestinal obstruction, are ones to be watchful of and give air. One other instance where I think air important is in cases where the patient seems to have the faculty to manufacture great quantities of mucous secretion in bronchial tract, especially children, completely fill up and overflow. In these cases one has to be careful not to give an overdose of ether, for if such a patient should be knocked out artificial means might be of no avail, since he would drown in his own respiratory secretions. Air in goodly quantities is the thing here and be watchful for danger signs.

Preliminary Medication—Some make it a routine practice to administer morphine with atropine, or morphine with scopolamine, or morphine alone before operation under ether. I do not believe in this procedure as a routine. In preliminary medication several things have to be taken into consideration. The time of its administration to get best results, and whether you are doing your patient harm or good by its use. (Should I be catechised on the minute chemical and physical results of giving and not

giving these drugs, I suspect that you would find me slow in answering, since what I have to say on this part of the subject is from practical experience). The things that seem to be in favor of its use are the lessening of excitement in the nervous and hysterical. Lessening of danger to shock and thereby benefitting the patient. Lessening the quality of ether taken. The points that I think are against its use are; I. In the first place all patients do not by any means need it. 2. Morphine or morphine and scopolamine may cause increased post operative vomiting. We all know that in some patients the simple hypodermic administration for relief without operative procedure cause vomiting. 3. The secreting glands are given more work after etherizatioin to get rid of post anesthetic poisons or toxins. Might this treatment not hinder this? 4. Does not morphine act to hinder peristalsis and thereby constipate? 5. Some of your main danger signs are abolished, pupil is contracted. Very little may be told about the breathing since respirations are made slow and shallow. 6. It certainly takes a far more experienced anesthetist to give a safe anesthetic after patient has had a very heavy dose of morphine, and especially combined with scopolamine. Why submit your patient to danger unless you are sure it does good in his particular case? In this connection I almost defy the man who at times can tell whether a patient after a heavy dose of morphine, since signs are altered to such a degree, is too far under or coming out. Do not under stand me to say that I do not believe in preliminary medication to some extent and when indicated. Heart cases I think should have morphine and atropine for fear of undue and prolonged excitement, also Goiter cases, the hysterical, nervous and dissipated. I think in all cases by far the most important way to overcome prolonged excitement is the manner in which the first stage of the anesthetic is given. Slow continuous drop ether and getting the patient well under before beginning to operate, thereby cutting down the amount of excitement and shock.

In the past year or so I have tried giving Aromatic Spirits of Amonia preliminary to and during anesthetic. Have tried to make myself believe that it was beneficial. From experience though I believe that ether and air may be so combined and handled that it not necessary and does no good to use Aromatic Spirits. Where I used it expecting to get results was in children more to fool them and do the bystanding parent the good by running the bluff. Not long ago I read an article in one of the Journals on Aromatic Spirits. Its main use here was to help patient react more quickly and diminish post operative vomiting. I have tried it on a few cases but cannot say whether I think it of much avail or not.

I am often asked how much ether I gave my patients. My answer is "Enough". I keep no record of quantity used. Try to give just enough and no more to meet the requirements of the case. This is the same answer that Dr. James C. Wilson (Professor in Practice of Medicine at Jefferson) gave his class after asking the question "How much would they bleed a patient? After receiving different answers, from several ounces to a gallon, Dr. Wilson's reply was — "Enough to meet the requirements."

I will only mention "Rectal Anesthesia or ether by the Colon" to condemn it. I have given ether by the Colon and certainly think it a procedure not to be

used unless all other ways the contra-indicated. First — on account of the danger attached to its use, and second, the trouble preliminary to its administration. I have drawn the remaining ether oil mixture from the colon, and know that it can be done, which is supposed to alleviate all further danger and cause the patient to immediately react, but no matter what anyone may say it is in my opinion a highly dangerous procedure and should be used with great caution.

It is not my place here to discuss chloroform, but just a word or so. Some use chloroform as preliminary ether, others use it to a surgical degre. Some use it and like to brag "What a good boy am I". I give chloroform when ether is contra-indicated. Have had no fatalities from its use but have come very near having them. I hate also to condemn chloroform but with my experience with ether alone in so many successful cases I do not think chloroform need be given but very, very seldom. Some say that in respiratory conditions chloroform should be given instead of ether on account of its irritant effect on respiratory tract. Good authority says that ether is contra-indicated only in acute conditions of the respiratory tract, that ether does no harm in old or chronic conditions. I dislike to hear doctors say they like chloroform. They will soon learn better by fatalities. I have heard men advocate chloroform for tonsilectomies, while I am sure there is no more dangerous place for its use.

About the use of ether in heart lesions, all that I can say is that in my experience I have had no fatalities and have not seen a case with a crippled heart do badly. Have had a number of these cases and think that in all probability the successful termination was due to the care and cautious way of giving the anesthetic when the true condition was known. Here I deem it very necessary that morphine and atropine be given, as I have mentioned in the preceding part of my paper.

I have not written this paper as an expert, and have tried not to bore and take your time by quoting from text books. What I have given you in this paper is as nearly as I can tell you my personal experience from careful observation in administering something over three thousand anesthetics without a fatality, and hope to impress the fact that all I have tried to do is to bring out the essential factors which I think necessary for the welfare and safety of the patient when he takes ether.

VESICAL CALCULI

Read before Eastern Panhandle Medical Society.

By T. K. Oates, Martinsburg, W. Va.

Vesical Calculi was formerly dreaded and gave a great deal of fear and pain but in modern surgery it is not considered difficult. The form of stones encountered are of three varieties, Viz: Uric Acid, Oxalic Acid and Phosphatic stones. The uric acid and exalic are primary, usually formed in the kidney while the phosphatic is secondary which develops in the bladder, following cystitis which is frequent septic.

Symptoms:

Pain in the region of the bladder with occasional hematuria.

Frequent micturition with severe pain in the penile region. Occasionally there is a perineal pricking with a frequent sense of obstruction to the flow of urine or an intermittent stoppage. An at-

tack of stone in the bladder is indicative of cystitis and if lasting the whole viscus becomes involved.

When the stone increases in size the penile pain is continuous. Changes in the position of the body or angular movements increase the symptoms.

When the stone is very large the patient notices shifting in side especially when turning over in bed.

Stone in the bladder may cause a sense of weight and discomfort above the pubes, in the perioeum or in the rectum.

Occassionaly the pain is referred wholly to the rectum.

The condition of the urine varies if the irritation has not been very great the urine is perfectly clear to the eye but should there be much disturbance the urine may contain pus, blood, and crystals of uric acid or oxalate of lime.

Diagnosis:

The only sure way of making a correct diagnosis is by a physical examination.

This can be done in various ways.

1. You can make a digital examination through the rectum or vagina.

2. An examination with a searcher, sound or lithotrite.

3. An examination with a lithopaxy pump.

4. Cystoscopic examination.

5. X-Ray examination.

6. Exploratory suprapubic laparotomy.

If there is a stone and there is a facet or facets that proves there are multiple stones.

Bigelow pointed out the value of the evacuating pump as a searcher for small stones that may elude the searcher.

Treatment:

1. Preventive.

2. Solvent.

3. Operative.

Preventive Treatment:

In case there is cystitis or much mucus it favors the formation of stones and it should be corected.

In case uric acid or oxalate of lime stones the treatment should be constitutional.

The patient should observe the rules of diet for a gouty or rheumatic individual.

The paient should exercise freely and perspire freely. Drink plenty of water and take saline laxatives. Salts of lithia or lithia combined with potash may be used with good results.

Piperazin is a powerful solvent of uric acid. It is also important to limit the use of fruits containing vegetable acids.

I am some what skeptical about the solvent treatment and only the smaller ones can be dissolved if any can be.

Operative Treatment:

In 1878 Bigelow introduced his operation of lithopaxy which combined the thorough crushing and complete evacuation of the stones.

About the same time came the aseptic methods of operation by the suprapubic route rather than by the perineal.

Surgeons usually select the methods of operation of which they are most familiar.

The mortality depends on the condition of the patient.

In male patients of advanced age the prostate should be removed the same time to prevent reforming of stones.

DIAGNOSIS AND TREATMENT OF CEREBRO-SPINAL SYPHILIS

Presented to West Virginia Medical Association, Fiftieth Annual Meeting, Fairmont, October, 1917.

By Dr. J. D. Willis, Roanoke, Va.

Syphilis is now recognized to be the cause of innumerable complaints which were hitherto unrecognized and because of this fact it is imperative that we make use of all the helpful agencies at our command for the positive diagnosis of or exclusion of syphilis.

Syphilis is the cause of such a large proportion of nervous complaints, as shown by a study of the blood and cerebrospinal fluid, that it becomes necessary to make these examinations in all nervous complaints unaccounted for by known definite pathology. Fully one-half of all cases of syphilis of the nervous system are not aware that they have syphilitic infection. So you see a negative history of luetic infection is worth very little, and to rule out syphilis on the grounds that the patient is of a certain family which is beyond reproach is certainly the height of folly.

Cerebrospinal syphilis is a regional localization of a general syphilitic infection. It is seldom that a definite diagnosis of complete specific tissue involvement can be made. And it would not be of additional value should such refinements of diagnosis be possible. Cerebrospinal syphilis may be generalized or it may be of a vascular, meningitic, or parenchymatous type.

Symptoms of a great many well recognized diseases may be simulated by cerebrospinal syphilis; especially is this true in the crises of locomotar ataxia. Epilepsy may be due to syphilitic pachymeningitis, and there are various neurasthenic symptoms resulting from syphilis of the nervous system.

Because of diagnostic aid gotten from the laboratory it is no longer necessary to wait for the characteristic gait to appear in tabes dorsalis or the committment papers to be signed in paresis before diagnoses are made and treatment begun. Sufficient it is to know that syphilitic infection of the cerebrospinal nervous system exists and this can be determined with a high degree of accuracy by laboratory tests.

It would be impossble in the scope of this paper to enumerate the signs and symptoms that would lead you to suspect syphilis of the cerebrospinal nervous system, even if I could think of all of them now—such would be legion.

Because of the very great prevalence of syphilis and the numerous ways in which it manifests itself, I cannot insist too strongly on routine laboratory tests for its detection. Most well regulated hospitals have adopted a routine Wassermann; particularly is this true of the medical and neurological services.

The following laboratory tests are invaluable in the diagnosis of cerebrospinal syphilis and they should be interpreted as symptoms of the disease: Wassermann on blood and cerebrospinal fluid, cell count, gloubulin reaction, whether or not Fehlings is reduced, and the Lange colloidal gold curve on the spinal fluid.

In general paresis Wassermann blood is positive in about 100 per cent of cases affected, and the cerebrospinal fluid Wassermann in about 90 per cent. In untreated tabes Wassermann blood is positive in 96 per cent to 100 per cent. In treated tabes in 40 to 50 per cent. In cerebrospinal syphilis Wassermann blood is positive in about one hundred

per cent of cases. All treatments should be controlled by these laboratory tests at stated intervals. In this way only can you know to what extent treatment should be carried.

It is now an accepted view among syphilographers that a cerebrospinal fluid study should be made on every syphilitic patient as early as the end of the first year of their infection, and no patient treated for syphilis should be discharged as cured unless the cerebrospinal fluid is found to be normal and the blood Wassermann normal after a provocative dose of salvarsan. This is important because about 20 per cent of cases in the secondary stage of syphilis show positive cerebrospinal findings. It is not uncommon to find luetic infection of the cerebropsinal nevous system as early as three or four months after the initial infection.

It might be well to mention some of the early signs of paresis and tabes. In paresis there is a change of character, patient may be irritable or depressed, there is inattention to business, erratic conduct and moral lapses. Later grandiose ideas will set in, the patient will have the most extravagant ideas of his wealth or powers. With the mental changes come physical changes, tremor of muscles of face, tongue, hands and limbs; speech becomes drawling, stammering or staccato. Gait is weakened and incoordinate, with increased knee jerks as a rule. Later the case assumes a more chronic aspect and dementia is more advanced. Here you may see crises of epilepsy, apoplexy, hemiplegia, or maniacal excitement. And still later complete paralysis, terminal dementia, bedridden, and wasting to the end.

Early signs of tabes are persistent frontal headache, sluggish response of pupils to light, diminution of the acuteness of hearing, loss of the tendo achilles reflex, lack of pain on pressure through muscles of calf of leg, and later loss of knee jerks, characteristic gait and possibly abdominal crises. The crises may however come as an early sign in the cases where there is an early posterior radiculitis.

Swift has very convincingly shown the importance of individualized treatment in a series of cases just reported. These cases take into account the various phases of luetic infection of the cerebrospinal system. He wisely states that it is important to determine before beginning treatment what symptoms are due to inflammation or exudation and what are due to degeneration of tracts or cortex. Many cases with early meningisit will respond satisfactorily to general administration of salvarsan, mercury and potassium iodide; and on the other hand there are cases found in which intraspinal treatment seems to be necessary in order to eradicate completely the central nervous lesions. Also many cases of tabes dorsalis respond satisfactorily to general administration of salvarsan and mercury. In a very great many cases of tabes, however, intraspinal treatment in addition to intravenous treatment with salvarsan will hasten the elimination of abnormal elements in the cerebrospinal fluid and bring about a permanent arrest of the degeneration.

In paralytic dementia much benefit may be expected, by combined intravenous and intraspinal salvarsan, in increasing the number and length of remissions, ultimate hope of recovery, however, is slight.

Intraspinal treatment of syphilis of the central nervous system is now an accepted procedure and the preparations which have stood the test of time are:

(1) The serum obtained from patients shortly after intravenous injeetion of Salvarsan; (2) Serum to whieh small quantities of Salvarsan have been added; (3) Neosalvarsan in small quantities and weak eoneentration; (4) Mereurialized serum, in whieh the Biehloride and Benzoate are used.

The objeets of therapy: (1) Amelioration of symptoms; (2) Cure of the disease; (3) Prolongation of life. Prior to giving intraspinal treatment it is well to give a short eourse of Mereury to prevent a Herxheimer reaetion of vital centers.

Favorable results of treatment in progressive tabes: Laneinating pains are lessened or disappear entirely. Gastrie and rectal crises are eontrolled or regress and ataxia is markedly decreased and sometimes disappears. Disturbances of sensation partially or eompletely elear up. Sphincter eontrol and sexual power improved or returned to normal. Patients put on weight, feel better and resume oeeupations. There is no return of absent reflexes. In aeute meningeal and vascular types of cerebrospinal syphilis the results are good. In the ehronic meningeal types with low lymphoeytie eounts the results are not quite so good. In tabes the improvement is due to elearing of meningeal involvement about the anterior nerve roots. Of course where there is destruetion of the anterior horn eells the disability resulting therefrom will be permanent.

Ogilvie's analysis of fifty-five eases of paresis treated by him showed eomplete remissions obtained in 32.7 per cent of eases; ineomplete remissions in 41.8 per eent, and failures in 25.5 per cent. He eoneludes that in the eases most satisfactorily influeneed the speeific proeess is probably confined largely to the interstices and meninges and is necessarily an early development. He further states that broadly eonsidered, intraspinal therapy, with the curative agents now at hand, may be said to be of value in true paresis only as a means of holding the disease in eheek for a period dependent upon the extent of its activity at the time treatment is instituted. That it is far superior in aeeomplishing this, to any other treatment known today, is unquestionable.

He says the real problem is to reeognize invasions of the central nervous system before even the interstitial tissue or the meninges are involved to any destructive extent. To do this it is neeessary to examine the cerebrospinal fluid in the secondary stage of the infection, and subsequentl to this stage at intervals. Should this be done neurologie involvement ean be detected and then in combined intravenous and intraspinal therapy there is adequate means of eontrol, thus preventing the development of general paresis.

Lumbar puneture for an intraspinal treatment should always be done with patient lying on his side anl with thighs well flexed on abdomen. Unless pressure in the subdural spaee is very low one and a half times as mueh fluid (15 e. e.) is removed as the amount of serum to be introdueed. If pressure is very high a correspondingly larger amount can be removed.

In intraspinal treatments with salvarsanized serum I follow the Ogilvie methor of procedure, beeause it is more scientific in that you know the exaet dosage of salvarsan you are introducing. It is not safe to give repeatedly more than one-half of a milligram. Doses of 0.2 or 0.3 mg. are safe at ten day or two week intervals. It may be well to alternate an intravenous treatment one week and an intraspinous treatment the

next and so on. The Ogilvie technic as originally described is as follows:

Ten cubic centimeters of clear human serum are obtained either by centrifuging a tube of freshly drawn blood at approximately 3000 revolutions for from ten to fifteen minutes, or permitting a clot to form by letting it stand overnight. (Originally 15 c. c. was recommended, but it has since been found that the smaller amount is sufficient, and productive of equally as good results.) It is not essential that an autogenous serum be employed. Sera taken indiscriminately from patients can be used, and where a large number of patients are to be treated the sera can be pooled and divided into amounts of 10 c. c. each. Care should be taken to free the serum absolutely from fibrin and cellular elements, and to this end it is sometimes necessary to centrifuge a second time. Under no circumstances should a serum be used that contains hemolized red blood cells. The test tube containing the serum is then placed in a water bath at body temperature until the salvarsan is ready to be added. In preparing the salvarsan solution the greatest care must be exercised in alkalinizing it. The sodium hydroxid solution must be fresh (preferably not more than four or five days old), and only a sufficient amount added to very faintly alkalinize the salvarsan solution. The salvarsan solution will be more readily and accurately alkalinized if the sodium hydroxid is added while the former is about body temperature. A very hot salvarsan solution requires more sodium hydroxid to faintly alkalinize it, but when it is cooled down the degree of alkalinity is apparently markedly increased, and a serum charged with such a solution invaribly produces a reaction (unusually root pain) when given intraspinally. The salvarsan solution should be prepared so that each cubic centimeter contains one milligram of the drug. While at first thought of minor importance, this part of the technic should be carefully considered. Unless one is familiar with laboratory work to some extent he is liable to miscalculate his dilution strengths and give more of the drug than is intended. With a 1 c. c. pipette, graduated into tenths or twentieths, the act amount of salvarsan desired for the case under treatment is added to the ten cubic centimeters of serum, care being taken that the two solutions are at the same temperature (preferably 37.5°C.). The serum should then be gently agitated to insure thorough mixing. It is now placed in a water bath thermostat at 37.5 degrees C. for forty-five minutes. From this it is placed in a thermostat at 56.0 degree C. for thirty minutes, after which it is removed from the water bath and as soon as the temperature is reduced to approximately that of the body, it is ready to be given to the patient.

Under no circumstances should a serum be given that is more than three hours old from the time it is removed from the last thermostat. The treatment is better borne, and the results are more satisfactory if the serum is used within an hour after its preparation. This is probably due to the fact that the arsenical compound can only withstand a limited amount of heat without becoming toxic and imparing its beneficial properties.

In my cases of cerebrospinal syphilis treated improvement of varying degrees has been noted in every case. I am going to report a case illustrating each phase of cerebrospinal syphilis and the results I have obtained:

Mr. G., age 26, a case of general

paresis with moderately advanced symptoms, treated one year ago. At the time of treatment patient was in a sanatorium for the treatment of nervous diseases, and he was entirely irresponsible and insane. Luetic infection acquired five years before. This patient had decidedly grandiose ideas. His mental condition dated back six months. The blood Wassermann and spinal fluid Wassermann were both strongly positive. Cell count was forty and globulin was increased. He was given four weekly intraspinal and intravenous treatments at the end of which time his mentality was entirely normal. His cells numbered ten and the cerebrospinal Wassermann was reduced to a 4 pus with .7 c. c. of serum. Blood Wassermann was weakly positive. This patient was discharged from the sanatorium a short distance from my town and I have learned that he is now having some recurrence of his trouble. I regret that it was impossible to keep this case under observation in order that he might be tested out at stated intervals,

Mr. J., locomotar ataxia, age 46, infection acquired seven years ago. Had evident eymptoms for four months prior to beginning treatment; at the time I saw him he had a decided tabtic gait and had a numbness of legs, almost lost knee jerks and he said that he had no idea in what position his legs were when at rest. His hearing was markedly reduced and his pupils were decidedly sluggish. He has now been under treatment for six months and his gait has improved almost three-fourths. He can now walk quite well and can also hear better and his general physical condition is remarkably improved. I failed to state that his cerebro-spinal fluid showed twenty cells at the time of beginning treatment and positive Wassermann with .1 c. c. His cells are now twelve and the C. F. Wassermann is positive in .7. Blood Wassermann is still weakly positive.

Mr. W., age 22, impossible to get history of when infection was acquired. One week before admission into Lewis-Gale Hospital he became suddenly paralyzed in the left side. He was also unconscious. His blood and spinal fluid showed positive Wassermann and the cell count was five hundred. This is a combined meningitic and endarterite type. He was given intravenous and intraspinal treatment, gaining partial use of his paralyzed limbs and regaining consciousness. He, however, died suddenly four weeks after beginning treatment from another hemorrhage of the brain.

Mr. W., age 35, acquired infection seven years ago, at which time he was given one dose of salvarsan—no treatment afterwards until two years ago at which time he showed a spastic gait. Since that time he has taken one hundred grains potassium iodide after each meal practically all of the time with no improvement. His spasticity increased until at the time of beginnig treatment he could hardly walk. His blood and spinal fluid were strongly positive and showed twenty-five cells. He had lively knee jerks and positive ankle-clonus.

After eight months treatment he now can walk almost as well as he ever could and says he feels perfectly well. He shows fifteen cells now and a positive Wassermann in .7. His blood is weakly positive. This is a case of cerebrospinal syphilis of the erbtransmyelitis type.

SOME FACTS ABOUT YEAST

The subject of yeast is of importance because, first, as has been pointed out in an editorial article in the Journal of

the American Medical Association (Jr. Am. M. Asso. 1916 IXIV, 1390 it possesses a distinct nutritive value, and because, secondly, it possesses therapeutic qualities. It is about some of the forms of yeast and their therapeutic properties that we wish to write. The matter of yeast treatment has recently received impetus as the result of the publication in the Jr. Am. M. Asso. (Oct 13, 1917) of an article by Dr. Philip B. Hawk and collaborators, which represents work done in the Laboratory of Physiological Chemistry of the Jefferson Medical College, and the Philadelphia General Hospital, both of Philadelphia, and the Roosevelt Hospital, New York.

Hawk and his colleagues obtained strikingly good results from the use of yeast in many pathological conditions, especially the purlent skin conditions such as acne and furunculosis and in constipation. That they did so is not at all surprising, for yeast has always acted well in these skin conditions, as is well known. Hawk mentions that yeast has been used in medicine since the days of Hippocrates (who used it in the treatment of leucorrhea); not, however, until the middle of the nineteenth century, was its use looked on favorably by the medical profession. Since then, its value has been attested by numerous observers, who have employed it in a variety of pathological conditions. Its value in certain skin conditions has been freely acknowledged by dermatologists—for instance, Schamberg has seen good results from its use in the treatment of ordinary furunculosis (Diseases of the Skin and the Eruptive Fevers, 1915) although it failed him in the furunculosis accompanying smallpox.

Hawk's researches are novel in that he employed as a therapeutic agent not the time-honored brewers' yeast, but the familiar Fleischmann's yeast of the bakeries and the household. This is the first time, it seems, that bakers' yeast has been employed systematically as a therapeutic agent, although Louvel (Renes Med., 1905-6,—fasc. 10, 16-19) seems to have used it in the treatment of sundry infections diseases, and according to Cailliau (These de Paris, 1908) it was used in 1896 by De Backer, who mixed it with equal parts by weight of white honey, and who, having used it thus in the treatment of furunculosis, considered that it was more active and better supported than ordinary yeast.

That brewers' yeast should have been used in the past is not at all surprising when we call to mind that, in all probability, in modern times at least, it was extensively used and tested by the employees of breweries, who found it readily accessible. A special virtue seems to have attached to brewers' yeast, probably from this reason. For instance, the yeast specified by Schamberg (loc. cit) is fresh brewers' yeast, and the U. S. Pharmacopaeia of 1876 defines yeast (fermentum) as "a peculiar insoluble product of the fermentation of malt liquors." It was dropped from the Pharmacopaeia of 1880, and has since remained unofficial. The U. S. Dispensatory (Remington and Wood) of 1918, describes it as a "flocculent, frothy, somewhat viscid semi-fluid of a dirty yellowish color, a sour vinous odor and a bitter taste." Suffice it to say, the appearance of brewers' yeast is not at all familiar to very many physicians, one reason being that it is not immediately available, except in some large cities. In country districts that are remote from breweries, the use of brewers' yeast is attended with serious difficulties.

Compressed yeast, the undried pro-

duct, is readily obtained and there is no reason why it should not be largely used.

The National Formulary, 1916, under the term "Cerevisiae Fermentum Compressum" recognizes compressed yeast and describes it as follows: "The moist, living cells of Saccharomyces cerevisiae Meyen (Fam. Sacchyromycetaceae) or of other species of Saccharomyces, combined with a starchy or absorbent base. White or yellowish-white soft, and easily broken masses, having a characteristic slightly sour odor, and not more than a faintly acid reaction to lithmus. When examined under the microscope, numerous oidum and mycoderma cells and starch grains are visible. Compressed yeast must not be used unless fresh, and free from mildew and musty odors." Sadtler (Industrial Organic Chemistry 1900) also has given a good description of compressed yeast: "It should be only slightly moist, not sloppy to the touch; the color should be a creamy white; when broken it should show a fine fracture; when placed upon the tongue it should melt readily in the mouth. It should have an odor of apples, not like that of cheese; neither should it have an acide taste or odor.

A certain disadvantage of fresh brewers' yeast in therapeutics has been mentioned, i. e., its non-availability. Certain other objections to its use readily come to mind, among them being the fact that as a rule it is decidedly non-uniform both as to composition and as to action. We would readily suspect this when we recollect that in the yeast of the breweries two well-marked varieties of saccharomyces have been recognized; a top yeast most active at 16°-8° C. On the different behavior of these varieties, different methods of brewing have been founded. Lardier (These de Paris 1901-1902) calls attention to the fact that brewers' yeasts obtained from different breweries behave differently so far as therapeutic action is concerned; moreover, that the therapeutic action of yeasts obtained from different barrels in the same brewry varies. Also the yeast in the same barrel varies at different stages of fermentation. He states that the difference explains in part the varying therapeutic results of different observers.

Besides varying in proportions of the different species of saccharomyces they contain, brewers' yeasts are apt to be admixed with various wild yeasts that enter the liquid from the air.

There is a difference of opinion concerning the nature of the constituent of the yeast which gives it therapeutic value. Some investigators claim a direct bactericidal effect, others regard such effect as due to by-products of fermentation such as alcohol and various acids, still others regard the action as due to the chemotactic influence of the high nuclein content of the yeast. According to the Dispensatory, the experiments of Walzou and Sacharow have shown that yeast increased the opsonic index of dogs for staphylococci and streptococci. This may help to explain its favorable action in infectious conditions.

The Dispensatory mentions the fact that the ordinary yeast cake of American bakers may well be substituted for brewers' yeast. In view of Hawk's investigations this statement may very well be true. Compressed yeast is generally to be preferred because of the fact that it is carefully standardized and a uniform product is always obtainable. Sadtler refers to the researches of Hansen—who early separated various species of yeasts used in the industries. Among these varities of Saccharomyces, cerevisial and Saccharomyces Pastorimus were

used in the brewing of beer; saccharomyces ellipsoides in the manufacture of wine. Sadtler states that it is prepared as compressed yeast in cakes, generally with the addition of potato-starch. The National Formulary does permit the presence of species of saccharomycetaceae other than Sacchyomyces cerevisiæ Meyen. At all events, the composition of bakers' yeast can be controlled, and this yeast possesses the advantages of availability and uniformity.

MENTAL DEFECTIVES

By Jas. R. Bloss, M. D., Huntington

Former 1st Ass't to the Superintendent, Huntington State Hospital. Exam. to Cabell Co. Lunacy Comm.

Read before State Association at Fairmont, October, 1917.

It has been sometime since I presented a paper before our Association. At this time it is done so for the reason that I feel we should think a little along the lines which my title brings to mind. Were I to specialize in any branch of our profession it would be as a psychiatrist. To me, it alone, is "the" specialty.

Some months ago it was brought very forcibly to us that the laity entirely and many physicians as well, were totally unable to grasp the idea of a differentiation between Feeble-Mindedness and Insanity. Unable to see that Insanity ment a diseased brain, and Feeble-Mindedness one undeveloped. It seems that this should be brought to the attention of the profession.

When we term an individual Feeble-Minded it is meant that mental development has been arrested. This does not mean that of necessity the size of the brain itself, or its weight is not up to the normal individual's, though in some forms it may be far below, in others even above the usual and still the ability to register percepts, from concepts, ideas and judgment is defective.

In the past we clssified patients as Idiots, Imbeciles, and Insane. During our term in the service of the State, covering a period of some seven and one-half years, it appeared to us that just what these terms really meant was a "terra incognita" to a very large proportion of the examining physicians. Frank cases of Idiocy were classified as Imbeciles; on the other hand the very opposite was often true.

The laity will recognize the Idiot or Imbecile. If an individual is not one of these then in the opinion of most persons, they are considered to be normal and responsible persons. But this is not true, for we have a higher grade of feeble-mindedness, the Moron. This type has been defined by the Royal College of Physicians, as follows "One who is capable of earning his living under favorable circumstances, but is incapable from mental defect existing from birth or from early age of competing on equal terms with his normal fellows or of managing himself and his affairs with ordinary prudence."

It is to Binet, that brilliant and painstaking French Psychiatrist, that we must give credit for the development of a measuring scale of Intelligence. Binet has worked out a scheme for actually measuring the intelligence of the individual. The men in general work see so few cases in the course of a year that it is asking almost too much of them to expect that they will familiarize themselves with this. Only those of the profession, who actually see and diagnose many cases per year should be expected to be proficient in these lines. Some

years ago I made some remarks as to Boards for Examination for Insane, etc. Since I cannot find it in our back *Journals.* I am inclined to think it was to some County Medical Society. At that time the statement was made that courts should depend upon the unbiased reports or disinterested persons, with a particular skill in these diagnoses. My opinion remains the same.

When we designate an individual an Idiot, we mean that the mental development, or age, has been arrested at the age of two years; an Imbecile is one whese mental acquirements are from 3 to 7 years inclusive. For those whose mental development is from 7 to 12 years the term "Moron" has been devised. The Binet scale gives us a very accurate method of measuring this.

The very important fact connected with this is that of its relation to Crime, Indigence, etc. We feel that only too often all are prone to see the "end product" of feeble-mindedness in the criminal and not the material in it's raw state. I cannot but feel that a large per cent of criminals are "made" not "born so". The records of reformatories and prisons, where careful studies have been made, show us however, that about 50 per cent of the inmates are far below the average from a mental standpoint. Do not misunderstand me. Not all are feeble-minded. But many are and it is these we must differentiate.

Now we come to Alcoholism. A number of years ago I had no patienc with Alcoholics at all. Today I realize that more often than not they are to be helped rather than censured. We find that a weak mentality, coupled to an environment that is bad, is really the thing which brings the condition about. Think of the material and then of the environment and any one will see why the end result is what it is. A very goodly percentage of the feeble-minded become Alcoholics. In this respect we must not lose sight of the effect of habit in the development of victims of alcohol. Many of the patient's neither like the effects or taste of drink. Does not this show that there was a weak mentality in the beginning?

Of late we have heard much of Feeble-Mindedness in its relation to Prostitution, and White Slavery. I do a great deal of work for the organization known as the Union Mission in Huntington as well as for the Salvation Army at that point. All of you are familiar with the classes with which such organizations have to deal. Practically all of the females are prostitutes and it has been of interest to study their mentality. I should say that from 85 to 95 per cent are feeble-minded. Now do not misundestand me that all prostitutes are such. This is not true. But do realize that an individual with practically normal desires and instincts, but no power of control immediately becomes a fit subject for an immoral life. A great deal is said of underpaid shop girls and the like. It is true that such conditions do exist, but many of them are under paid because of an inherent inability to learn and so to receive greater incomes. They may not be considered Morons, but are certainly not many degrees removed from it.

Investigations of inmates of girls reformatories show that from 51 to 57 per cent are frank defectives. In the report giving 51 per cent there is one suggestive statement made—"not more than 6 of a total of 135 seemed to have really goods minds". It is readily seen why the White Slave traffic is possible when we consider these existing conditions. As more complete studies of Mental Defec-

tives are being made, the relization comes that large percentages of our Paupers, Ne'er-Do-Weels, and Truants are being found to be feeble-minded.

"It may be asked if feeble-mindedness is such a potent factor in these great social problems, why is it that the fact has not been discovered sooner? The answer is that feeble-mindedness itself in its higher form has not been under stood. Even yet, "feeble-mindedness" in the popular mind is synonymous with Idiocy, or Imebcility, those lower grades of mental defect which are often manifest in the faces of the individuals. Every one recognizes the idiot, or the imbecile; the foolish boy or the silly girl, but if the person is not one of these he is considered to be normal and responsible. Not until we began to test intelligence and had secured standards showing that to be able to manage his affairs with ordinary prudence a person must have intelligence beyond that of a 12 year old child, did we realize the type that we now call the Moron, the high grade of defective.

It is this discovery that has opened our eyes to the actual condition and enabled us to formulate working hypotheses which have proved marveously fruitful.

Having recognized this high grade type of feeble-mindedness we see that there are four lines along which investigation must proceed-four problems to be solved.

First—There is the social problem to which we have already alluded, the question of the place that the feeble-minded fill in the social life of today; their relation to crime, pauperism, intemperance, the social evil, incompentency and disease.

Second — The psychological problem. What sort of mental processes have these feeble-minded people? What is the condition, for instance, of their memory, attention, sensation, perception, emotion, will and judgments?

Third — The pedagogical problems. What can they be trained to do? How shall we train, educate and discipline them What moral training do they get or can they take?

Fourth — The biological problem. What is the cause of mental defectiveness? What is the physical basis of it. and what methods of prevention can be suggested?"

—*Goddard.*

ANNOUNCEMENTS AND COMMUMICATIONS

Maj. J. E. Cannady,
Charleston,

My dear Major:—

Just a few lines to let you know that I am now overseas and have been assigned to the British Army. There are a great many American Medical officers with the British. Of course we wear our own uniforms and are under orders at any time from the American Government.

It has only been two months since I first went to Washington but we have been getting good training here and will soon be where the big things are doing.

A great many of us here have all our mail sent care of American Express Company at London and I hope you will find time to let me hear from you some time. Are the doctors coming in pretty well over the State? I certainly hope so at least. Kindly give our State Medical Journal my new address and have them

send me copies for May, June and July, and then mail them to the new address in the future. With kindest regards and best wishes, I am,

Very respectfully,
David E. Ealy,
1st Lt. M. R. C. Casual care of
American Express Co. 6 Haymarket Square, London,
England.

—o—

Company 20 Battalion 5, M. O. T. C.
Camp Greenleaf, Ga., July 3, 18.

Dr. J. R. Bloss,
Huntington, W. Va.,
Dear Doctor:—

Kindly adress the *Journal* to me care of 45 Infantry, Camp Gordon, Chamblee, Ga., as I am ordered to that post today. Feeling that the West Va. physicians and surgeons might be interested in the hospital train now stationed at Ft. Oglethorpe, inclosed you will find a copy of Trench and Camp in which you will find a very good description of it, you might have printed in the *Journal.*

Tell all the physicians and surgeons who can possibly leave home to come and join in this great fight for justice and liberty.

One surgeon just from France says the fight is not half over, and when our boys get into it we will need many more physicians and surgeons over there, come and get prepared for the great work that is before us.

This is a fine camp, the officers are kind to us, we get plenty of real good food and they give us just enough work to do to keep us busy, besides we hear some of the best lectures in this country and from France.

Wishing to be remembered to all West Virginia physicians. If any of you want any information about camp Greenleaf, Ga. just write me at the address below and I'll answer all questions I can.

The work is great fellows, come in.

I am yours fraternally

Capt. Harry G. Steele, M. R. C.
Company 45 Infantry
Camp Gordon,
Chamblee, Ga.

—o—

Davis, W. Va., July 5th, 1918.

To all West Virginia surgeons who are members of the State Association:

But three months remain in which to prepare for the Surgical Section of the State Association meet. Place Harpers Ferry, Time October Second. The response to the circular letters I sent out some time ago was most gratifying.

Now we want ten or twelve papers. More can be used. Some of those who now expected to be with us may have gone "across".

Also, and most important, we want many more men on the program than heretofore. We want about six or more men on each paper.

One to open discussion; one to take up for 2 to 3 minutes each feature of the paper. In this way every man interested in this section can and should appear on the program.

Then when we have our transactions printed he will have a chance to correct his remarks and they will appear in the transaction permanently.

For instance on Odgen's paper on Gall Bladder and Gall Duct Surgery discussion opened by Dr. A. 5 minutes. Incision Dr. B. 2 minutes;—ectomies vs. ostomies Dr. C. 3 minutes. Accidents, how to avoid Dr. D. 3 minutes. Drainage, Dr. E. 3 min. In this way we can have more interest aroused.

The following are some of the topics that seem to be of leading interest just now.

First let me say that some one, prob-

ably the Chairman will head the list on W. Va. Surgery. As a subdivision "Fair and Unfair Competion" could be dwelt on.

Causes of surgical failures. When to operate prostatics. The irritable bladder of the female. New concepts of renal surgery. What has the surgeon a right to expect of the general practitioner. What has the general practitioner a right to expect of the surgeon. Pelvic pathology in the female, especially those due to neglected labors and obstetric accidents.

Pelvic pathology in hysteria. Perforation of abdominal viscera, traumatic and non traumatic. Anemia, its surgical treatment. Neglected surgery, Gastroenterostomy, when does it fail. When succeed. Abdominal emergencies.

When to operate on fractures of spine and head. Blood transfusions. Osteomyelitis, a ten minutes paper on diagnosis and treatment of sinus affections. Hemiplegia, spontaneous, traumatic. Surgical treatment of pleural affections. Early treatment of benign or suspicious tumors. Treatment of uterine haemorrhage. War surgery will come when some of our members return to give their experiences.

As I have so often said—the insistent demand is for short, snappy, helpful, practical papers. WRITE your papers as lond and technical as you wish, READ only the best parts. Don't read the anatomy, physiology, not often much on etiology.

ABOVE ALL WRITE ME NOW, saying you will have a paper, if you have a preference ask for discussion from some certain men.

Let us show what W. Va. surgeons can do. Let this be the best ever.

A. P. Butt, Sec'y., Surgical Section.

We hope to have a fracture demonstrated. To show the patients actually in bed with some of the newer apparatus applied.

Every man who has a splint of his own design made by his carpenter, smith or himself is asked to present it. NO OTHERS WANTED.

—*A. P. B.*

—o—

Elkins, W. Va., June 24, 1918.

Dr. J. R. Bloss, Editor,
State Medical Journal,
Huntington, W. Va.

Dear Doctor:—

Please announce in The *Journal* that the Committee on Workmen's Compensation hopes to have a conference in the near future with the State Commissioner of the Workmen's Compensation Fund, and would like to receive suggestions from as many of our Asociation's members as posible, likewise their grievances, in the matter of their relations with the Commissioner.

Yours very truly,
Wm. W. Golden.

—o—

Dr. James R. Bloss,
Huntington, W. Va.

My Dear Doctor:—

Some one has just sent me the inclosed, which I hope you will publish in the *Journal.*

The thing is well written and may help some fellow across the line.

With regards,

Sincerely yours,
J. R. Hunter.

SOMEWHERE IN FRANCE!

"Yes," said a well known surgeon a few months ago, "I have accepted a commission in the Medical Reserve Corps, and yesterday received word that I was to leave for 'somewhere in France.'

"It means just about the most com-

plete readjustment in my affairs and my way of living any one could imagine. My income has averaged for the past five years close to fifteen thousand dollars a year. We have lived right up to it. How I am going to get along on three thousand, and support my family, I have not been able to figure out. Of course, I have given up this house, that we have lived in for the past ten years, and," smiling ruefully. "I understand it was snapped up at once by another doctor. My wife and the two boys are going to live with her folks in a nearby town. I feel the worst over the necessity of giving up our home, for I know what it has meant to my wife. But she agreed with me that if the country needed me, and I could be of real service, there was only one thing to do—no sacrifice was to great. So, it's all settled.

"Don't think I haven't spent many a sleepless night, or that I haven't seen the tears well up into my wife's eyes more than once. This "pulling things up by the roots," and imposing hardships on your loved ones, make one question if it is, after all, the right course to take. Sometimes I have wondered how I could possibly afforded to do it. Then when I thought of the urgent need for experienced surgeons, of the wounded men who had risked all in this fight for the principles we believe in, I have always reached the conclusion that I could not afford not to go and do my part. I could not stand the loss of self-respect, the feeling that would be with me forever if I failed to do what seems to me to be a real duty.

"It is true, I can't 'afford' to give up my business, to deprive my wife and children of their home, and to isolate them in the country, but bigger and more insistent than all these, is the other fact that I cannot afford to neglect the call of my country."

Is there anyone who can read these words and not feel the spirit of earnest, patriotic service that prompted them? sacrificing the work of years, a splendid income, and the comforts of home, for what? The fulfillment of his duty as he sees it, a faithful adherence to certain ideals of service, and the maintainence of his own respect! Before him are the trip across the Atlantic the inevitable hardships of living with none of the comforts he has been used to, the hardest kind of work with nerves keyed to the highest tension, and finally the constant dangers of the most awful warfare the world has ever seen. But though he knows the work he must do, the discomforts he will undergo, and the risks he will run, he never falters. Suffer he is bound to, and fatigue such as he has never known, is certain to be his lot. He may be wounded or called upon to pay "the supreme debt." But the "die is cast," and even though he knew the end of it all was only one more mound "somewhere in France," he still would smile—and go on. For the sake of humanity, the honor of his country, the pride of his family, and his own self-respect, there is nothing else to do—he "cannot afford *not* to."!

—o—

July 12, 1918.

Dr. Franklin Martin, Member of the Advisory Commission of the Council of National Defense and Chairman of the Council's General Medical Board, authorizes the following:

After a tour of many American cities, which enabled them to meet and address representative groups of American physicians and surgeons, Sir James Mackenzie, noted heart specialist of Edinburg and London; Colonel Sir William Brbuthnot Lane, veteran surgeon of the

Zulu, Egyptian and Boer wars, and authority on bone surgery, and Colonel Herbert Alexander Bruce, of Toronto, now consulting surgeon to the British Government to this country have returned to Great Britain.

"In the travels of our mission through America, we have been to many centers of war activity here," said Colonel Bruce, "and we will have a great deal to say when we get home about the marvelous and effective program which you are carrying out on so colossal a scale. I want to say that it has heartened us very much, and that we know it will hearten the people at home when we report there."

The visitors first came to Washington to pay their respects to Surgeon General Gorgas. Thence they departed for Cincinnati to attend the annual meeting of the American Surgical Association. At a special patriotic session in the Hughes High School, Cincinnati, June 6, under the auspices of the Ohio State Committee, Medical Section, Council of National Defense, Colonel Bruce described the British system of caring for the wounded.

He stated that the British have forty hospital trains in France fully equipped with doctors and nurses, each train having a capacity of 600 beds—the whole constituting a mobile hospital of 24,000 bed capacity. He paid tribute to the heroism of the field hospital service and to the American surgeons and physicians in that service.

Sir Arbuthnot Lane told of the treatment of thousands of soldiers wounded in the face, some with jaws gone, others with cheeks or noses shot away. Colonel Lane is consulting surgeons at the Queen's Hospital at Sidcup, where this facial reconstruction or plastic surgery is the special work. "The man who loses an arm, a leg, or is injured in the body, can go back to the bosom of his family, but the man whose face is distorted, no matter how much his family may love and cherish him, suffers most," said Sir Arbuthnot. "So I began to isolate these cases, beginning with five doctors. This start has developed into a magnificent hospital with 750 men, and we are literally making new faces. We have enlisted the services of the best dentists, sculptors, war workers, and surgeons, and developed specialists in transferring bones from other parts of the body to the face. If you could see how happy these men are, it would be a lasting satisfaction to know their gratitude."

Sir James Mackenzie told of some of the heart cases referred to him. "Instances of 'irritable heart', he said, "are due to general weakening of the body through illness in the trenches." Outdoor exercises and sports are curative agencies, he said.

Sir James, in speaking of the examination of recruits,, said "The test of a man's fitness as a soldier should depend upon what he has been doing and what he is able to do. A young fellow was sent to me because his heart was supposed to be bad. I asked him what he had been before he entered the service. He said he had been a butcher. I asked him if he had been able to carry the carcass of a sheep upstairs and whether such work had been a regular part of his duties. He said that he been accustomed to doing exactly that, and frequently, and without physical discomfort; I said: 'I do not need to examine your heart. If you can do work like that you are certainly fit.' Too many men are rejected because of alleged defects which are more apparent than real."

It was after this meeting that Colonel

Lane asked why women are not eligible to the Medical Reserve Corps. He said that he had been instrumental in having them admitted to the Medical Services in Great Britain.

The noted British surgeons were guests at the monthly meeting of the General Medical Board of the Council of National Defense and at the meeting of the State and County Committees of the Medical Section of the Council, held Sunday, June 9, in Chicago. At this time Colonel Bruce took special pains to speak of the work of American surgeons many of whom are members of the General Medical Board who are doing most important work at the front--Drs. Frederic A. Besley, George W. Crile, J. M. T. Finney, Charles H. Peck, William S. Thayer, Harvey Cushing, George E. Brewer, Richard H. H. Harte and others. "These men went over as medical men — and stayed as soldiers, for they operate at the front lines amid bursting shells and are continually under fire. While I was in France before leaving to come here on this mission Sir. Arthur Sloggett of the British Medical Service sent for me and said he wished me to take a mesage to America. This is what he said: 'I appreciate the very excellent work which American doctors and American nurses are doing in the British service.' He said they had been a very great help and an inspiration to the service. In fact, they will never forget the American doctors and nurses. He recommended a large number of your medical officers at the front for the same honors that he had recommended for those in his own service, but owing to the regulation of your Government they were not able to accept. On a recent trip to the front, I met also a number of your soldiers, who gave one the opinion when one looked in their faces that nothing would stop them, and you know what they did when they first encountered the Hun quite recently. I didn't think you need to worry about the enemy getting a few feet of territory. One or the other side can get some ground if they pay a sufficient price for it, and during the offensive of the 21st of March, and subsequent dates, the Hun paid a very large price for the territory which he took. Even if we should be driven to the sea, and if we have to take to the boats and go to England, this battle is not over. 'We will make it so that ships sailing through the Irish sea sail a sea boiling with submarines,' said one of the German leaders in February, 1917. To which England replied: 'Make it boil like the caldrons of hell, and we will sail just the same.' We of Canada and you of the United States are of the same race and blood. Now that we are comrades in arms, we have a still further bond uniting us. I have difficulty in appreciating the difference between Canada and America. I can tell you the difference between England and America. England says: 'As it was in the beginning, is now, and ever shall be. Amen.' America says: 'As it was in the beginning, is now, and by gosh there's got to be a change.' That spirit now represents the opinion of England as well as that of our allied nations.

"The German chancellor when America entered this war very sneeringly remarked that the weight you would throw into the scale would not be greater than that of a straw. To this Mr. Punch replied that he quite agreed with the statement of the German chancellor, but he would like to point out and make the prediction that

it would be the last straw which would break the camel's back."

Sir James Mackenzie praised highly the classification of American surgeons as reported by Dr. William J. Mayo for the Committee on Surgery of the General Medical Board. The class indexing and coding of the more than 20,000 American physicians was termed ideal by Sir James, who said that the United States is avoiding the mistakes made by England. "England," he said, "was precluded from such a systematic course by the suddenness with which the war came."

Colonel Lane told of the enormous help by American surgeons who came over long before America's entry into the war, saying that he had been asked to speak about the difficulty of getting medical men for the military service. He said: "The difficulty with us has been to keep them out. I do not suppose you are any different from our men. I have always understood that the medical people in America were the keenest people in the world. Our people have gone without a word. They gave up their practices, their futures, their wives and their children. They did not ask: 'How much are we going to be paid?' or 'What is going to become of our families?' they came at once to the aid of their country. I do not think you will have to ask the medical men to come. I think the difficulty, my friends, will be keeping them away."

After their attendance upon the sessions of the American Medical Association convention, the visitors made a trip to Rochester, Minnesota, as guests of the Mayo brothers. In Boston, on June 19, the visitors spoke at sessions of the Massachussetts Medical Society in the Boston Medical Library. After this, came visits to Detroit, Cleveland, Pittsburgh, and New York City, accompanied by Dr. Franklin Martin, Member of the Advisory Commission of the Council of National Defense and Chairman of the General Medical Board, and Major Henry D. Jump of the General Medical Board, arrangements being made in advance for them to speak at meetings held under the joint auspices of the State Committees, Medical Section, Council of National Defense and the local medical societies. Upon all these occasions the visitors urged the need of physicians at the front, and warmly seconded the efforts of the State Committees, and of Dr. Martin and Major Jump, in appealing to the doctors to enroll in the Medical Reserve Corps, Naval Reserve Force and Volunteer Medical Service Corps.

In Detroit on June 21, the visitors were shown about the city and visited the Packard and Ford plants. In the evening at a big meeting in the new Elks Temple Auditorium, Colonel Bruce spoke of the work of Detroit surgeons at the front, including Drs. Angus McLean, Burt R. Shurly, Theodore A. McGraw, Harry N. Torrey, William A. Spitzley, Frank B. Walker, Louis J. Hirshchman, Ernest K. Cullen, and also Dr. John R. Sherrick, a Michigan physician who has been awarded the military cross for gallantry.

Colonel Bruce frankly criticised Americans for eating too freely, saying that then menu cards in hotels and restaurants astonish foreigners. He urged that white flour and meat be conserved to a greater extent, and that the use of motor cars for pleasure be cut down.

Colonel Lane urged that instead of being lulled into security by the apparent success of war-winning work, America should forge ahead to greater efforts.

From Detroit the party went to Cleveland by boat. After a dinner at the Union Club, there was a largely attended meeting at the Chamber of Commerce, over which Dr. C. A. Hamann presided. In addition to the talks by the visitors, Dr. William E. Lower of Cleveland, who recently returned after a year's service with the Lakeside Unit at the front, also spoke.

Thence to Pittsburgh, where Dr. J. J. Buchanan, Chairman of the State Committee, Medical Section, Council of National Defense, and his coadjutors, had made such preparations for the meeting that two thousand persons thronged Carnegie Music Hall for the meeting Sunday night, June 23,.

"When I left England I felt certain that we should win the war sometime," said Colonel Lane. "Since I have been in this country I have become more certain, and I have come to believe that we shall win it soon." Colonel Lane spoke with enthusiasm of the shipbuilding activities he had seen on this side. He regarded as equally efficient the medical organization work in Washington under Surgeon General Gorgas and Dr. Franklin Martin "You can make a soldier in four months for the sea, earth, or air," he said, "but it takes seven years to make a doctor, and after we get him he must learn his job. It makes a vast difference in the work of a hospital whether or not it is organized for efficiency, and this depends largely upon the fitness of the physicians for their particular work."

Colonel Bruce said that the work of the medical men in the armies had stamped out tpyhus and typhoid fever, there being when he left France only twenty-seven cases of typhoid fever in an army of two million men. He told of an experience he had had in a hospital bombed by the Germans, adding that sixteen wounded German prisoners had been killed by one of the bombs dropped.

In Philadelphia, the visitors were the guests not only of the physicians, but of the city as well. Forty prominent men, including city officials and leaders in various activities, attended the dinner in their honor at the Bellevue-Stratford Monday night, June 24. During the day the visitors had been taken to Cramp's Shipyards, the plant of the International Shipbuilding Corporation at Hog Island, and the Eddystone plant of the Remington Arms Company. The meeting at 9 o'clock in the Bellevue-Stratford ballroom was presided over by Dr. Edward Martin of Philadelphia. Colonel Lane said: "When America sent Dr. Alexis Carrel to Europe, she did more than if she had sent ammunition, guns and food. His discovery has worked miracles among the wounded of the Allies." Colonel also praised highly the other doctors and nurses from the United States.

Sir James Mackenzie asserted that England is not in danger of starvation. "Nor are there any signs of famine at present," he said. "Up to the last harvest, food was scarce, and we had a hard time to get the staples of life, especially cheese and potatoes. Now things are running smoothly." Sir James urged that efforts be made to counteract German propaganda in Russia.

Colonel Bruce asserted that the imaginary boundary line between Canada and the United States had been wiped out, and that the present war has cemented the relation betwen the countries. Speaking of England's independence of Germany, he said: "We make our own dyes, and we do not bother or even give

a thought about the supply of German potash. Five thousand ships enter and leave British ports each week. We have loaned 600 ships to France and 400 to Italy. Before the war less than 200,000 women were engaged in work; now the number exceeds one million, in more than 400 branches of munitions manufacturer. Social distinctions have been leveled in the utter democracy of overalls and caps."

On the eve of their departure, the distinguished visitors were entertained at a dinner given them by the New York doctors at the Metropolitan Club.

—o—

Dr. J. R. Bloss, Editor,
W. Va. Medical Journal,
Huntington, W. Va.

Dear Doctor:—

During June the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Cutter Laboratory:

ANTIPNEUMOCOCCIC SERUM, TYPE I.

Mead Johnson & Co.:

MEAD'S DEXTRI-MALTOSE, No. 2
MEAD'S DENTRI-MALTOSE, No. 3

H. K. Mulford Co.:

ANTIPNEUMOCOCCIC SERUM, TYPE I.
ANTIPNEUMOCOCCIC SERUM, POLYVALENT.

Yours truly,
W. A. Puckner, Secretary.

Council on Pharmacy and Chemistry

New and Nonofficial Remedies.

Antipneumococcus Serum.—A serum obtained from horses immunized with virulent pneumococci. Each lot of antipneumococcic serum is submitted by the manufacturer to the U. S. Hygienic Laboratory for potency test. Early massive (from 50 Cc. to 10 Cc.) intravenous doses of a highly potent serum prepared from the type of pneumococcus present in the case to be treated are necessary. The serum used should be obtained from an animal immunized with pneumococci of the type corresponding to that present in the special case under treatment. Thus far Type I serum alone seems to be on reasonably secure clinical grounds.

Antipneumococcus Serum, Type I, Lederle. — Marketed in a pressure syringe containing 50 Cc. Schieffelin and Co., New York.

Antipneumococcic Serum, Type I, P. D. & Co.—Marketed in a piston syringe containing 50 Cc. Parke, Davis & Co., Detroit, Mich.

Antipneumococcic Serum, Type I, Squibb.—Marketed in vials containing 50 Cc. E. R. Squibb & Sons, New York.

Barium Sulphate-Brady for Roentgen Ray Work.—A brand complying with the N. N. R. standards for barium sulphate for Roentgen-ray work. Geo. W. Brady &Co., Chicago (Jour. A. M. A., June 1, 1918, p. 1599).

Anti-Pneumococcic Serum, Type I, Cutter.—Marketed in vials containing 50 Cc. H. K. Mulford Co., Philadelphia, Pa.

Antipneumococcic Serum, Polyvalent, Mulford. — Prepared by immunizing horses with dead and living pneumococci of the thre fixed types (Types I, II, III). Marketed in double ended vials containing 50 Cc. each, with sterile needle and tubing for intravenous injection. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., June 22, 1918, p. 1923).

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., EDITOR
C. R. ENSLOW, M. D.
J. E. RADER, M. D. ASSISTANT EDITORS

Huntington, W. Va., August, 1918

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.
Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

ADVERTISEMENTS

Advertising forms will go to press not later than the 10th of each month.
All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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SIXTH DISTRICT—P. A. Haley, Charleston, W. Va., one-year term; H. L. Goodman, Charleston, W. Va., two-year term.

ENROLLMENT CAMPAIGN FOR THE MEDICAL RESERVE CORPS AND THE VOLUNTEER MEDICAL SERVICE CORPS.

By authority of Surgeon General Gorgas of the Army, Surgeon General Braisted of the Navy and Surgeon General Blue of the Public Health Service, the chairman of the General Medical Board of the Council of National Defense, has instructed our State Committee, Medical Section of National Defense to enroll as quickly as possible all medical men into either the Medical Reserve Corps or the Volunteer Medical Service Corps. This campaign is being launched in every State in the Union. Committees from the states with which West Virginia is grouped held a meeting in Washington, D. C., on the 18th of July, ten members of our State Committee being present at that meeting.

The physicians of our state will be listed and classified according to availability for service. Consideration being given to age, physical condition, dependents, essential community and essential institutional need. Application

blanks for enrollment will be furnished through the state and county committeeman, who are expected to see personally every doctor in the state and request his enrollment, depending upon eligibility, in either the Medical Reserve Corps or the Volunteer Medical Service Corps. It is the desire of the National Defense Council to have definite reports on the entire profession of the United States by August 15th, 1918. It is no longer a question of what one can do, but of what must be done.

The statement was made by one high in authority at our meeting in Washington, that the need for doctors was never greater as the Medical Reserve Corps was practically exhausted". With the above information before you it is hardly necessary to impress upon the State and County Committeeman to see to it that these applications are completed and in the hands of the Chairman of the State Committee not later than August 12, 1918.

We can render no more patriotic service at this time than by giving this matter our prompt attention. This is not a draft, neither is it a desire on the part of the Committee to coerce. The medical profession have responded nobly, but we have yet greater sacrifices to make. Those signing applications for the Medical Reserve Corps will only be called upon when their services are actually needed. Those signing for the Volunteer Medical Service Corps will only be asigned to special duty as circumstances require. Let us get busy and see to it that West Virginia is taken out of 23rd place in the present order of States quotas and placed in the front rank.

J. E. RADER,
Chairman State Defense Committee.

Supplementary List, June 1to 30 incl.

WEST VIRGINIA

Recommended for Commissions:

Charles Elihus Copeland, 1532 Quarrin Street, Charleston, Capt.; Richard Terrell Davis, Charleston, Capt.; Martin Van Buren Godbey, 1546 Virginia Street Charleston, Capt.; George Augustus MacQueen, 1012 Virginia Street, Charleston, Capt,; Hugo George Rogers, Charleston, 1st Lt.; Harry Hepple Young, Charleston, Capt.; Hugh Holmes Carr, Fairmont, 1st Lt.; Henry Dickinson Causey, Fairmont, Capt.; Charles Walter Waddell, 725 Coleman Avenue, Fairmont, Capt.; William Shell Crawford, Follansbee, 1st Lt.; James Edward Hubbard, Hinton, 1st Lt.; Karl Campbell Prichard, Huntington, Capt.; Edward Ernest Rose, Huntington, 1st Lt.; Edward Elmer Shafer, 309 1-2 20th St., Huntington, Capt.; Guy Yost, 942 5th Avenue, Huntington, Capt.; Tib Neuberry Goff, Kenova, Capt.; Charles Robert McGuffie, McMechen, 1st Lt.; Boaz Baxter Cox, Morgantown, 1st Lt. Robert Waldorf Fisher, Morgantown, 1st Lt.; Harry Alexander Turk, Newell, 1st Lt.; Tamline Nickleson Deem, Parkersburg, 1st Lt.; Hubert Edward Gaynor, Parkersburg, 1st Lt.; Thomas Lewis Harris, 600 1-2 Market Street, Parkersburg, 1st Lt.; Charles Browning Williams, Philippi, Capt.; Attie Thompson Gorden, Reedy, 1st Lt.; William Londas Y. Currey, Sandyville, 1st Lt.; Holly Lee Casto, Spencer, 1st Lt.; Benjamin Smith Parks, Spencer, 1st Lt.; Harlan Herbert Staats, Spencer, Capt.; Warren Worth Koiner, Sullivan, Capt.; Benja-

min Lainer Trayniham, Sweet Springs, Capt.; Benjamin Harrison Hildreth, Worthington, 1st Lt.

As to the meeting this fall I have nothing now of special interest to give you. The meeting is to be held at Harper's Ferry, October, 1, 2 and 3.

Wish you would make an appeal for papers on Medical Subjects for this meeting. If the Secretary of each local Society would go over the meeting of his Society during the past year and pick out the best papers read before said body and then urge the author of said paper to present it at the State Meeting our wants would be supplied and every section of the State would be represented.

Any suggestions as to Programme you may offer will be gladly received.

With kindest regards and best wishes, I am,

Fraternally,
J. Howard Anderson.

State News

Dr. Kelly C. Thomas and Dr. V. L. Dyer of Welch were examined recently in Huntington by the army and medical board and recommended for commissions in the M. R. C.

Dr. D. G. Williams of Martinsburg is stationed in Washington in the M. R. C.

Dr. Fred Holroyd of Athens is now located at the Emergency Hospital at Nitro, W. Va.

Lieut. C. F. Mahood of Alderson is now stationed at the Base Hospital, Camp Greene, Charlotte, N. C.

Lieut A. E. Bays of Barboursville is stationed at the Base Hospital, Camp Lee, Petersburg, Va.

Dr. H. S. Falconer who formerly practised in West Virginia but who has been at Bedford, Va for sometime has now relocated in West Virginia at Fairmont.

Dr. Guy Yost of Huntington has been commissioned as Captain in the M. R. C. and is awaisting his call for service.

Dr. O. F. Covert, Captain in the M. R. C. of Moundsville is at Camp Sherman, Ohio. He has been assigned to the surgical side at the Base Hospital. Major Powell of Grafton and Capt, Meighen of Wheeling are also at Camp Sherman.

Carrying out orders of the state health council issued several months ago, the state hygienic laboratory, located for several years in Morgantown, connected with the university, is being moved to Charleston where it will be directed in the future under the supervision of the state department of health.

First Liutenant Thomas M. Barber, connected with the medical corps, a son of Mrs. T. L. Barber, is the first Charleston boy to be cited by the War Department for conspicuous gallantry in action in the operations of the American expeditionary force in France. His conduct thus recognized was at the capture and defense of Cantigny, May 27-31.

His mother has received a certified copy of the extract from the general order which says he "gave first aid in the open under heavy shell fire and during the entire action worked without regard to personal safety."

Dr. Charles A. Barlow, of Benwood, former superintendent of the state asylum for the insane at Spencer, left today for Fort Porter, N. Y., where he enters the army medical corps service at the rank of captain. He expects soon to be detained for active service with the expeditionary force in France. Since resigning from the asylum su-

perintendancy, Mr. Barlow has been visiting his old home at Beverly in Randolph county.

Dr. E. E. Shafer of Huntington has gone to Camp Greenleaf, Georgia, to assume his duties as a captain in the United States army.

The Huntington General Hospital has unfurled a service flag which contains nine stars, six nurses and three physicians as follows:

Nurses. Mrs. N. S. Woodyard, Mrs. Agnes Eubank, Miss Anna Ballard, Mrs. Anna Ballard, Mrs. Virgie Rader, Miss Edith Miller, and Mrs. T. W. Peyton.

Staff Physicians. Capt. Karl Prichard, Lieutenant E. E. Rose, and Lieutenant Earl B. Gerlach.

Born to Captain and Mrs. J. E. Van Pelt of Huntington a son, July 8. Captain Van Pelt is "over there", somewhere in France.

Capt. Harry G. Steele of Bluefield is stationed at Camp Gordon, Chamblee, Ga.

Mr. Pliny O. Clark of Wheeling attended the Rotary Club meeting held in Kansas City. The Hospital Section of International Rotary had an interesting session.

A meeting of the West Virginia State Committee, Council of National Defense wes held in Parkersburg July 8th, Major Cannaday, of Charleston Capt. Hunter of Huntington Chairman Rader of Huntington, Dr. A. P. Butt of Davis, Dr. Golden of Elkins and Dr. Hoffman of Keyser, and Dr. Anderson of Marytown were present.

Dr. J. E. Rader of Huntington attended the meeting of the Council of National Defense held in Washington, July 18th.

Dr. K. C. Prichard, Captain in the M. R. C. of Huntington accompanied by his wife left July 18th for Camp Hancock, Augusta, Ga.

Mayor George A. MacQueen of Charleston, his office has resigned and will enter the army as a captain in the medical corps. Mayor MacQueen is one of the best known physicians and surgeons in Charleston. The army commission was tendered the mayor by Surgeon General Gorgas, and he immediately accepted.

Dr. and Mrs. A. I. Marple and Dr. and Mrs. F. O. Marple of Huntington returned recently from a motor trip to Spencer, where they visited relatives for a few days.

Dr. E. E. Rose, of Huntington recently commissioned in the medical reserve corps, has been ordered to a base hospital at Montgomery, Ala., for duty, is the word received by his friends here.

Dr. T. N. Goff of Kenova has been commissioned as captain in the M. R. C. and leaves for duty sometime this month.

Capt Earl Gerlach M. R. C. of Huntington is stationed at Fort Oglethorpe, Ga.

Dr. Lambert of Hinton is stationed in France at a Base Hospital.

Dr. G. W. Wentz formerly of Chester is now re-located at Weirton.

Dr. W. A. McMillan and family of Charleston are spending some time at their summer home on Jacquet River, New Brunswick, Canada. Dr. McMillan will return this month to Charleston.

Dr. M. V. Godbey of Charleston has gone to Fort Oglethorpe, Ga. where he will enter the training school for physicians. He has received a captain's commission.

Major J. E. Cannaday, of Charleston was a recent visitor in Huntington in connection with the workings of the draft board.

A number of Huntington physicians have applied for commissions in the M.

R. C. among them being Drs. R. H. Pepper, L. A. Williams, L. T. Vinson, J. H. Steenbergen.

Dr. W. W. Heald of Huntington commissioned as a first lieutenant in the M. R. C. was called to report for duty at Fort Oglethorpe, Ga. July 2t8h.

Dr. Frank LeMoyne Hupp and family of Wheeling are spending some time at their summer home at Hulett's Landing, Lake George, New York.

Lieut. David B. Ealy formerly County Health officer of Marshall County, Moundsville, is now in England. He has been assigned to the British Army for the present.

Mr. Pliny O. Clark, Superintendent of the Ohio Valley General Hospital of Wheeling has been loaned to the American College of Surgeons for three weeks for some special work in conection with the College's Standardization Campaign which is now on.

Dr. W. W. Strange of Huntington who graduated from the University of Virginia in June and was located at Nitro has been called to New Haven, Conn. to enter training.

Dr. M. F. Hoover, was born in Webster County, W. Va. March 14 1869. And died June 19 1918. Aged 49 years three months and five days. In his boyhood days the school privileges in Webster County were not as good as today, yet he took advantage of those meager opportunities, and by hard study he qualified himself for teaching, passed the examination and began teaching when but seventeen years old.

He taught school for a number of years in Webster County. His ability as a teacher was recognized by the people, and he was elected County Superintendent of Schools in 1899. After serving the people in this capacity for some years, he decided to qualify himself as a physician. He graduated at the Louisville Medical College in 1907, passed the State examination, and for eleven years practiced his profession in Webster and Braxton Counties. His ability as a physician brought him into notice, and for four years he served as a member of the Board of Health in Webster County, and also of the Municipal Board of Webster Springs. He was at the time of his death Chief Examining Physician of the Draft Board of his County.

As a physician he was ready at all times to answer any calls day or night, and was as attentive to the poor as to the rich. As a citizen, Dr. Hoover was ready to hlp any good cause, and to aid any progressive movement in his community and therefore he had a host of friends.

He married Miss Emma Boggs of Bois, West Virginia, March the ninth 1914. They came to live at Webster Springs about four years ago, where they purchased a nice home.

Being the company physician for the West Virginia Midland Rail Road, as well as for most of the lumber companies on that line, it necessitated him traveling a large territory, often being called to emergency cases to Braxton Co. some twenty or thirty miles. When he could not reach it by train, he would ride a wheel. He never seemed to think of his own health when others were sick.

About sixteen months ago, his health, which has always been good, began to fail, yet he kept up his practice almost to the last. He stopped too late. Heart trouble had developed. He had the best medical attention by the local physicians, also at the Louisville Kentucky Hospital, and the Mercy Hospital at Baltimore. Nothing could be done. For some months he knew the end was fast approaching and made the necessary preparations

for the Beyond. When talking of his condition, he always expresed his faith in God. While he suffered intensly at times, he never complained. His faithfulness to duty made him loved and respected by all who knew him. He will be missed by a host of friends in this part of the state, and by the West Virginia Medical Association, of which he was a member. But there is another who feels this bereavment more keenly than we. Upon whom the blow has fallen with crushing weight. There is a home where this man was known as the world new him. A place where a heart is lacerated and bleeding, where a loving wife feels lonely.

To his wife, his brothers and sisters, there are two sources of consolation: One, that he fell while at the post of duty, in service for others. The other, that there is a fountain of strength, infinite in power, from which they may draw in time of need. Funeral services was conducted at 6 a. m. June 21st at the M. E. Church South, by the writer, after which the Masonic Fraternity, of which he was a member took charge, and accompanied the body to the home cemetery near Cowen, and at "High noon" laid it to rest till the final day.

—A. E. O'Dell, Pastor.

Dr. Christopher Tompkins, former dean of the medical college of the College of Virginia, died suddenly at his home in Richmond July 20th.

Dr. Tompkins was apparently in his usual good health when greeted by friends on the street of Richmond Saturday. He was 69 years of age and for many years was one of the leading physicians of Richmond.

Major William Tompkins, a son is with the American army in France.

Society Proceedings

The Mercer County Medical Society met June 20th, 1918 at eight o'clock p. m. at the Chamber of Commerce, Bluefield, W. Va.

The minutes of the last meeting were read and adopted.

Under the clinical cases, Dr. S. R. Holroyd reported a child six years old, which he thought to be suffering from pelvic peritonitis.

Dr. Fox reported a case of Horse-shoe Kidney, age twenty four years old, married at the age of fifteen, mother of four children and had four miscarriages. This case had been diagnosed years ago as a probable cystic pancreas, and was referred back to him one year later for some pelvic surgery and while under the anesthetic, he decided to make an exploratory incision and see if he could locate her former trouble and found it to be a horse shoe kidney.

Dr. W. H. St Clair reported a case in which he found to be a cyst between the uterus and bladder about the size of a large orange and containing milky fluid, but no sac. He drained this and packed it with iodoform gauze.

Dr. Horton reported a case of a woman with a prolapsed uterus, with a duration of forty-five years.

Under papers, Dr. H. E. Camper, being unavoidably absent, requested the secretary to read his paper on pyelitis, which was discussed freely. Dr. Cramper showed great thought in the preparation of this paper, which is being mailed to the *Journal* for publication.

It was decided to make our next meeting in July a patriotic gathering. We have the Glenwood Park at one p. m. Thursday, July 20th, 1918. Every mem-

ber will be expected to take a basket and we will have dinner on the grounds.

Drs. T. E. Peery, C. T. StClair and A. D. Wood were appointed on arrangements.

Being no further business before the society, the meeting adjourned to meet the third Thursday in July at Glenwood Park.

E. H. Thompson, Secretary.

Propaganda for Reform

Some Nostrums.—Continuing its policy of giving the public the facts in regard to worthless, injurious or misleadingly advertised nostrums, the Louisiana State Board of Health has analyzed the following "patent medicines": Dermillo, a skin and complection nostrum composed zinc oxid, calcium carbonate, starch and salicylic acid in water, colored and perfumed.—Wendell's Ambition Pills, a "great nerve tonic," containing strychnin, ferrioxid, pepper, cinnamon and ginger, and probably a little aloes.—Orchard White, a toilet preparation to be mixed with lemon juice, reported to be a mucilage containing bismuth citrate, boric acid, alcohol and gum tragacanth.—Exelento Quinine Pomade, a hair preparation found to consist chiefly of petrolatum, some liquid petrolatum, a trace of oil of gaultheria, sulphur, and among other things, a trace of quinin.—Sloan's Liniment, which appeared to be composed essentially of oil of turpentine, oil of camphor, oil of sassafras and capsium.—Vick's Vap-O-Rub, which appeared to be a mixture of petrolatum with camphor, menthol and oil of thyme, eucalyptus and turpentine.—La Creole Hair Dressing, a perfumed solution containing lead acetate, sulphur and glycerin, alcohol and water.—Prescription A 2851 for Rheumatism, formerly said to have been known as Eimer and Amend's Rheumatic Remedy, which appeared to be a sherry wine containing 7.5 per cent. potassium iodid (Jour. A. M. A., April 6, 1918, p. 1024).

Guaiodine.—Examination of Guaiodine, a preparation of the Intravenous Products Co., Denver, in the A. M. A. Chemical Laboratory shows that, instead of containing free "colloidal" iodin as claimed, the preparation is essentially an iodated fatty oil, containing only combined iodin. The referee of the Committee on Pharmacology reported to the Council on Pharmacy and Chemistry that equally misleading, in view of the Laboratory's findings, are the implied claims that the antiseptic action of Guaiodine corresponds to that of free iodin. Guaiodine is advertised chiefly for the treatment of gonorrhea by means of obviously false claims. The Council declared Guaiodine inadmissible to New and Non-official Remedies because of false statements as to composition and action (Jour. A. M. A., April 6, 1918, p. 1026).

Neoarsphenamine.—The Federal Trade Commission has granted an importing license to the Diarsenol Company, Inc., 475 Ellicott Square, Buffalo, for neodiarsenol, the Canadian brand of neoarsphenamine. Licenses to manufacture neoarsphenamine have also been issued to The Takamine Laboratories, New York, to the Farbwerke-Hoechst Co., New York, and to the Dermatological Research Laboratories, Philadelphia. The safest and most effective products, provided one has mastered the technique, are the arsphenamines—not the neoarsphenamines (Jour. A. M. A., April 6, 1918, p. 1027).

American-Made Acetylsalicylic Acid.—At the request of the Council an Pharmacy and Chemistry an examination of the market supply of American-Made

acetylsalicylic acid has been made in the A. M. A. Chemical Laboratory by P. N. Leech. The investigation shows that there are on the American market, made by American firms, several brands of acetylsalicylic acid that are just as good as, if not better than, the widely advertised Aspirin-Bayer. About a year ago the Council on Pharmacy and Chemistry deleted Aspirin-Bayer from New and Non-official Remedies. Since the Bayer aspirin patent expired in February, 1917, thereby making it possible for manufacturers legally to produce and sell acetylicylic acid in the United States, the Council established standards for the quality of this unofficial drug. As a result, the following products have been found to meet these requirements and are included in New and Non-official Remedies: Aspirin-L. and F., Acetylsalicylic Acid-Squibb, Acetylsalicylic Acid-Merck, Acetylsalicylic Acid-Milliken, Acetylsalicylic Acid-M. C. W., Acetylsalicylic Acid-Monsanto and Acetylsalicylic Acid-P. W. R. (Jour. A. M. A., April 13, 1918, p. 1097).

Unduly Toxic Arsphenamin.—In view of the reports in current medical literature of untoward results from the use of arsphenamine and neoarsphenamin, Dr. G. W. McCoy, Director of the U. S. Hygienic Laboratory, Washington, D. C., requests that sample of any lot of these arsenicals which have shown undue toxicity be forwarded to the Hygienic Laboratory for examination (Jou. A. M. A., April 13, 1918, p. 1110).

Hall's Catarrh Cure.—Another victim fails to get the hundred dollars offered in cases in which this preparation failed to effect a cure. The promoters informed its victim that before paying the guarantee, he would have to prove that his case was one of simple catarrh not complicated by any other disease and that he had taken sufficient of the cure (Jour. A. M. A., April 13, 1918, p. 1113).

Antipneumococcus Vaccine. — The work by Lister in the diamond mines of Kimberly, South Africa, gives promise of a successful method of inoculation against lobar pneumonia. Lister finds that the pneumonia prevalent among the workers in the diamond mines is due mainly to three groups of pneumocci, and that inoculation with a vaccine made from the three groups prevents the occurrence of pneumonia as caused by members of these groups (Jour. A. M. A., April 20, 1918, p. 1163).

Misbranded Nostrums.—The following are some "patent medicines" which the federal authorities held to be sold under false claims: Ascatco, containing 13 per cent. alcohol and some opium.—Mexican Oil, containing over 57 per cent. alcohol, together with essential oils, glycerine, red pepper, emodin, menthol and a small amount of opium alkaloids. —Persil, containing 40 per cent. alcohol. Though claimed to contain, in addition, asparagus, parsley, celery, buchu, and juniper berries, it contained no appreciable qualities of celery, buchu, juniper, asparagus or parsley.—Dr. D. Kennedy's Favorite Remedy, containing 18 per cent. alcohol, nearly 50 per cent. sugar, and over 4 per cent. potassium acetate, with methyl calicylate, aloes, licorice and oil of sassafras.—Our Standard Remedy, tablets containing rhubarb, senna, scoparius, licorice, red pepper and some amonia compound with indications of aloes.—Dr. King's Throat and Lung Balsam, claimed to relieve coughs and colds and consumptive patients in the last stages of the disease.—"White Pine Expectorant" and "White Pine Balsam" (Allan-Pfeiffer Chemical Co.), a syrup contain-

ing alkaloid (probably morphin), chloroform, alcohol, benzoic acid and plant extract, but no extract or tar of white pine.—California Tuna Tonic Tablets, pills containing iron corbonate and a small quantity of nux vomica alkaloids (strychnin, etc.). — Alorine Antiseptic Suppository, containing quinin sulphate, boric acid and tanic acid.—St. Joseph's Quick Relief, containing 32 per cent. alcohol with Peru balsam, camphor and red pepper.—"Andrews' Wine of Life Root or Female Regulator", containing over 14 per cent. alcohol, sugar, methyl salicylate and tannin. "Andrews' Wine of Life Root Annex Powders", composed of sodium chloride and sodium bicarbonate, with a small amount of sodium carbonate. — Clark Stanley's Snake Oil Liniment, a light mineral oil mixed with about 1 per cent. of fatty oil, red pepper and possibly a trace of champhor and turpentine (Jour. A. M. A., April 20, 1918, p. 1183).

Neurosine and the Original Package Evil. — Neurosine advertisements ask that only original bottles of Neurosine be dispensed when physicians prescribe the nostrum. The reason is obvious: the bottle has the name blown in the glass and this is an invitation to the patient to purchase more on his own initiative and also to recommend the preparation to his friends. The danger to the public from the self-administration of mixtures of bromides, such as Neurosine, is obvious. Neurosine is said to contain potassium bromid, sodium bromid, ammonium bromid, zinc bromid, extract of lupulin, fluidextract cascara sagrada, extract of henbane. extract of belladonna, extract of cannabis indica, oil of bitter almond and aromatic elixir. This chemical blunderbuss has been advertised for use in insomnia, hysteria, neuresthenia, migraine, etc., etc. It has been recommended for children suffering from chorea. In all the years that Neurosine has been exploited to physicians with such remarkable claims, we have never seen a report of a careful clinical study in which the product has been used under the conditions which scientific investigation demands. (Jour. A. M. A., April 27, 1918, p. 1251).

The Toxicity of Arsphenamin (Salvarsan).—James C. Sargent, Milwaukee, Wis. and J. D. Willis, Roanoke, Va. report untoward effects from the intravenous administration of American-made salvarsan (arsphenamin). Such experiences are not unusual, but should be reported. Untoward results followed the use of the German salvarsan. Such reactions may be due to faulty preparation, to deterioration of certain ampules of a batch, to idiosyncrasy of the patient or to faulty technic or preparation or injection. There is no reason to believe that the arsphenamin made in this country is more toxic or less satisfactory than that formerly imported from abroad (Jour. A. M. A., April 27, 1918, p. 1254).

Medicine

ACETYLSALICYLIC ACID, OR "WHAT'S IN A NAME"

Under the caption "What's In a Name?"the current (April issue of the *Journal of Industrial and Engineering Chemistry* has an editorial dealing with the nomenclatures—common and proprietary—of acetylsalicylic acid. The editorial was prompted by an article by Dr. Leech printed in the same issue. Replying to its own question :

"The answer to this question in so far as it applies to acetylsalicylic acid (popularly known as aspirin)is the difference between eighty eight cents, the price the druggest must pay for every

one hundered tablets of Bayer aspirin, and forty cents, the cost of an equally pure American product. Naturally, this difference in cost is passed on to the individual consumer.

"That no scientific justification exists for this difference in cost is clearly shown in the contribution by Dr. Paul Nicholas Leech, of the Chemical Laboratory of the American Medical Association, page 288 of this issue.

"On the other hand, the excess profit fully warrants the extensive and shrewdly-worded advertising campaign now in progress a company which must eventually fail because in the first place, it is contrary to the prevailing spirit of modern advertising, the motive of which is constructive rather than destructive, and, in the second place, it appeals merely to the temporary ignorance of the public at large, and has no basis in fact.

"We have been informed that the Custodian of Alien Enemy Property has taken charge of the stock interests of alien enemies in the company conducting this propaganda. Surely the Custodian will not care, even in a trustee capacity, to continue as a participant in a misleading campaign whose sole purpose is the perpetuation of a monopoly hitherto enjoyed under full patent protection."

The article to which the editorial refers is a somewhat technical one giving the figures of an examination made, at the request of the Council on Pharmacy and Chemistry, in the Chemical Association by Paul Nicholas Leech, Ph.D., of various American brands of acetylsalicylic acid (aspirin). The result of the investigation may be summed up briefly in the statement that there are on the American market, made by American firms, several brands of acetylsalicylic acid that are just as good as, if not better than the Bayer product. *The Journal* has called attention to the misleading propaganda on the part of the Bayer Company (Farbenfabriken vorm. Friedr. Bayer & Co.), in its attempt to prepetuate the monopoly granted under our inequitable patent laws. This is done by conveying the inference that the only pure acetylsalicylic acid on the market is that known as "Aspirin-Bayer." Physicians should again be reminded of the facts in the case of aspirin: Practically no other country in the world, and certainly not Germany, the original home of aspirin, would grant a patent either on acetylsalicylic acid, itself or the process for making it. The United States granted both! As a result no one in this country except the Bayer Company could for seventeen years manufacture or sell acetylsalicylic acid either under its chemical name or under any other name. Nor was it permissible for hospitals or individuals to import it. While the monopoly held, the American people were compelled to pay from six to ten times as much for acetylsalicylic acid as were the people of Great Britian, France, Germany, Austria-Hungary, Denmark, Holland, Norway or Sweden. At a time when American druggists were compelled to pay 43 cents an ounce for acetylsalicylic acid as aspirin, just across the border in Canada it sold for about one-third the price.

About a year ago the Council on Pharmacy and Chemistry announced that "Aspirin-Bayer" had been deleted from New and Nonofficial Remedies while the scientific term, acetylsalicylic acid, was retained along with standards to insure its quality. The necessity for a standard becomes evident when it is remembered that acetylsalicylic acid is not yet an official drug, and its purity,

therefore, is not subject to the control of the federal Food and Drugs Act. It is worth while at this time to remind physicians that several brands of acetylsalicylic acid (aspirin) have been found to comply with the standards set by the Council on Pharmacy and Chemistry and have been admitted to New and Nonofficial Remedies. These, of course, are thereby subject to the control of the federal law to conform to the standard to which they profess.

Leech's report gives still greater weight to the suggestion that has been made for some time, viz., that physicians should prescribe acetylsalicylic acid under its scientificname, exen though, in the opinion of *The Journal,* the proprietary name, aspirin, has become common property since the expiration of the acetylsalicylic acid patent. Every consideration of public interest, of patriotism and of ordinary common sense should prompt physicians to specify acetylsalicylic acid in writing prescriptions.

TYPHOID IN AMERICAN CITIES

In this issue is the sixth annual summary of typhoid death rates in American cities of over 100,000 inhabitants. It need hardly be said that absolute accuracy is not claimed for these figurers. Clerical errors are occasionally made in reporting figures to us and exact verification is naturally impossible. It is evident, too, that the usage in reporting typhoid deaths varies somewhat in different communities so that the recorded death rates are in some instances not strictly comparable. One source of error and misapprehension to which reference has been specifically made (see footnote, page 777) is the inclusion of deaths of non-residents occuring in city hospitals along with the deaths properly attributed to the city's own population. This procedure naturally tends to exaggerate the rates in the neighboring suburgs and city typhoid rates generally as compared with rural communities. There is, how ever, no satisfactory means of controlling data of this sort, and it is believed that the practice we have followed in this particular is in general not unfair, especially when the same method is observed consistently through a series of years. It must be remembered also that if non-resident deaths were eliminated from the city figures in each case, it would still not be possible to inclulc the deaths of residents occuring outside the city itself or the deaths due to infection contracted by non-residents within the city limits. In no case can it be maintained that exact accuracy is secured, and the figures that we employ can be regarded as only an approximation.

Making a reservation as to the precision and completeness of the statistical data furnished us, it may be considered that these typhoid summaries have a definite value. It may be true that the relative differences in the typhoid death rates of cities with rates under 5.0 per 100,000 are not specially significant, but there can be little doubt that the difference between those with rates under 5.0 and those with rates over 15.0 is significant and should be taken into account by public health authorities. There is reason to believe, also, that the annual typhoid summaries printed by *The Journal* have had a influence in stimulating local interest in the typhoid situation, and in a number of instances in causing methods of sanitary reform to be set on foot. *The Journal* has received so many communications to this effect that there is no escape from the conclusion that these annual summaries

have been useful to members of the profession and to health officers in many places.

It is of great interest to note the remarkable decline in the total average typhoid rate that has occured in the large cities of this country since '10. Whatever be the stratistical objection in regard to accepting the figures on their face value, it can hardly be questioned that a very great improvement has taken place in the typhoid situation in this country since the publication of these annual summaries was first begun. The 1917 typhoid death rate in a population of approximately 25,000,000 will bear comparison with the rate in a similar population anywhere in the world. The health officials of American cities deserve great credit for this improvement which has, to a large extent, freed sanitary science in this country from the reproach of excessively high city typhoid.—*Journal A. M. A.*, Marh 16, 1918.

Surgery

SOME SUGGESIONS FOR THE DIETETIC, PRE-OPERATIVE AND AFTER CARE OF SURGICAL CASES.

F. L. Richardson, M. D.
Boston, Mass.

It seems to me that both the surgeon and the anesthetist have had their minds so carefully focused on the technical procedures of the operation and the conduct of the anesthesia that certain other factors in the care of the patient have either escaped their notice or have not received the attention that I believe they deserve. I refer particularly to the dietetic and medical preparation and after care of the patients.

It is necessary to speak of certain conditions and the factors that contribute to their production before taking up the treatmnet.

Let us first consider postoperative nausea and vomiting, and later postoperative gas and intestinal stasis. We will all admit that these are the things that cause the patient the most discomfort of any part of the surgical recovery. I wish also to call your attention to the effect of preparation on kidney function.

There are quite a number of factors that contribute to post operative nausea and vomiting.

(1) The surgical condition of the patient.

(2) Amount of intraabdominal trauma incident to the operation.

(3) Method of induction and maintenance of the anesthesia.

(4) Preliminary drugging.

(5) Duration of the anesthesia.

(6) Acidosis.

(7) Personal habits of the patient.

(1) Patients who have had intestinal obstruction almost always have nausea and vomiting following the operation even though the obstruction is relieved surgically. This is due, in part, to the surgical condition, but I believe that it is also due, in part, to the fact that they have had an insufficient amount of food. These patients cannot retain, nor is it desirable to give, food by mouth, and it is not often that one has an opportunity of giving rectal feedings before operation.

(2) Where ever it is necessary to handle the abdominal viscera to any considerable extent, especially if the handling is done roughly, we have intestinal stasis for a varying length of time following the operation. This stasis may be

so marked as to be practically an obstruction and give rise both to nausea and vomiting and to the collection of gas in the intestines.

(3) The induction of anesthesia should be as rapid as is possible with safety to the patient thus reducing the amount of saliva swallowed. Where ether is the anesthetic used this saliva contains ether in solution and this is a direct chemical irritant to the stomach. I believe that it is the absence of this factor that accounts, in part, for the smaller amount of nausea and vomiting followng gas-oxygen anesthesia.

(4) Morphin preliminary to an operation quiets the nerves of a patient, reduces the time of induction and reduces the amount of anesthesia used by reducing the amount of tidal air. On the other hand it sometimes causes nausea and interferes with peristalsis. When used it is best combined with atropin which has the advantage of reducing the amount of saliva secreted, so that less saliva is swallowed during the induction period.

(5) All inhalation anesthetics, with the possible exception of nitrous oxid, must be regarded as poisons, therefore the smaller the dose compatible with therapeutic results the better for the patient. This means the shorter the duration of the anesthesia and the lighter the anesthesia the better. Wherever there is a choice between deep anesthesia for a short period or light anesthesia for a longer period I belive that the light anesthetic is to be preferred, provided the surgeon can do his work with equally good end results. The question of whether a deep surgical anesthesia ever cuts off afferent nerve impulses is yet in dispute, there being, what seems to be, good experimental evidence on both sides. It is well recognized, clinically, that deep anesthesia in itself produces a condition quite similar if not identical with shock. It is entirely independent of the amount of blood lost, but of course it cannot be entirely separated from the results of trauma, because deep anesthesia is never produced except in cases where the trauma of the operation makes a deep anesthesia necessary. For this condition I have suggested the term *anesthetic fatigue.* This same condition is present to a less degreee in most long anesthesias with slight trauma, and it would seem as if it might be connected with the degree of saturation of the liquid bodies with the anesthetic.

(6) The question of acidosis in relation to anesthesia is one of the most obscure in the whole realm of anesthesia. It is even a question whether the name acidosis should be applied to the symptom complex as we usually see it. I hesitate to make many statements about the chemistry of this condition, yet it is necessary to say a little to give a more scientific foundation on which to base working formulae. If the present belief is true the chemical substances with which we are concerned come from the breaking down of the fats and to a lesser degree from the breaking down of proteids. We are chiefly concerned with those coming from the breaking down of the fats. Normally sugars assist in the catabolism of the fats and the concentration of the fatty acdis in the blood is never excessive. Where there is deficient oxygen supply to the blood or when the amount of available sugar is remarkably reduced as in carbohydrate starvation, substances resulting from the incomplete catabolsim of fats are liberated in excessive amounts and excreted in a partly broken down condition. We find them in the urine as acetone, diacetic acid, B-oxabeturic acid, etc. There is

also diminished excretion of carbon dioxid by way of the expired air.

With our incomplete knowledge of the cellular metabolism, and physiology of anesthesia, it is impossible to do more than theorize about the effects of inhalation anesthetics on these complicated processes. It seems significant though that all the general anesthetics except nitrous oxid are fat solvents and are absorbed by the fats of the body in a concentration dependent on the concentration of the anesthetic in the blood and the duration of the exposure—the length of time the anesthetic has been given.

In practice the problem is usually still further complicated by a varying degree of starvation, and it is to this particular factor I wish to direct your attention.

It seems to me we are victims of tradition in this branch of the surgical field as we have been in other branches.

When ether was first introduced it was a great step forward when it was recognized that water either before or after the operation in itself did not cause vomiting, but on the other hand there was less severe vomiting if given. It seems to me that it is now time to recognize that food, judiciously given, does not cause vomiting, but on the other hand reduces the amount of nausea and vomiting.

Withholding food is not done entirely on account of vomiting. In abdominal operations it is not advisable to have the intestines filled, yet how often you see emergency operations on patients who have had no sort of dietetic prepartion without serious embarrassment to the surgical procedure. Did you ever see serious vomiting in these cases unless there was marked sepsis or obstruction? I think that I can answer this for you negative. Is it not sufficient to have the stomach and colon empty if there is no gas in the small intestines? I believe this usually is sufficient.

To have the entire alimentary tract free from food means in itself intestinal stasis, with accumulation of gas from fermentation. Add to this the normal stasis following an abdominal operation and you have enough potential trouble to cause the patient considerable discomfort, and the surgeon some worry.

The question of what food to give before an operation, and how much, is in many ways more a medical than a surgical problem, and it is even a problem for the specialist in medicine. We will consider this more specifically later.

(7) Some people are easily made seasick and some are not. It seems to me that those patients who are easily made seasick in general have more postoperative nausea and vomiting, and for lack of a scientific reason for this I call it the *personal habit.*

Now let us take up the second great cause for discomfort of the patient following operation—intestinal gas and stasis.

Gas is due to fermentation and it is normally present, but the normal intestinal peristalsis prevents the accumulation at any one point and assists in its expulsion. Intestinal stasis then is the thing that makes gas a menace and the problem of gas and stasis many very properly be taken up together.

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JAS. R. BLOSS, Editor
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C. R. ENSLOW, J. E. RADER, Assistant Editors
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OBSERVATIONS ON THE PATHOLOGY, SYMPTOMS AND DIAGNOSIS OF BRAIN ABSCESS OF OTITIC ORIGIN.

Read at Fiftieth Annual Meeting of West Virginia Medical Association, Fairmont, Oct., 1917.

Dr. H. R. Johnson,
Fairmont, W. Va.

The subject presented in this paper is too comprehensive to attempt to cover the entire field in the limited time allowed, hence, it must necessarily be limited to some particular phase of the subject, with some approach to thoroughness, rather than a hurried and superficial review of the whole.

As to location, brain abscess may be classified in two general divisions, first, those above the tentorium or cerebral and those below the tentorium or cerebellar.

It may be further classified as acute and chronic.

It may follow acute or chronic suppuration, but those more frequently met with are found as complications of chronic suppuration of the middle ear, or an acute exacerbation of the chronic form.

Brain abscess occurring with suppuration of the middle ear was observed at a very early period of medical history. In fact Hippocrates recognized such a relation.

Libert in 1856, first clearly demonstrated and established the causal relation between suppurative otitis media and brain abscess.

While the operative treatment of brain abscess is one of the boasted achievements of modern surgery, it may be somewhat of a surprise to learn that the first successful operation was performed as early as 1768.

The relative frequency of brain abscess as a complication of aural suppuration is one to twenty-six hundres cases of the acute type, and one in twenty-five hundred of the chronic form.

These statistics would no doubt show a different result if carefully revised from many of those reported as a cure

were observed following acute exacerbations of the chronic type.

Grunert found that 91 per cent of the cases are due to chronic aural purulency, and the majority of long standing, with more or less necrosis of the temporal bone.

In children where the bones are thinner and development dehiscences more frequently found, the acute disease of the ear, is more often the cause of brain abscess, than in the adult.

In a chronic infection of long standing, within the confines of a limited space, with extensive necrosis of the bony structure, the question might well be asked, why brain complications do not more frequently occurr?

MacCuen Smith, in explaining this, says, "the Pathology of brain abscess formation, is identical with Sinus Thrombosis. Their occurence, no doubt would be more frequently encountered, were it not for the obstacles offered, by the dura in its resistence to microbic invasion."

"In this connection we must bear in mind the important fact that the dura will more frequently succumb to sudden or accidental infectious exposure, than to the usual slow process of carious erosion.

"In the latter, the firm resistence of the strong fibrous tissue comprising the dura is greatly increased by considerable thickening, and later, still further fortified and protected by the formation of granulation tissue."

One point made by Smith in this explanation is deserving special emphasis, and that is: that he takes the view that brain abscess in its pathology is identical with sinus thrombosis in that the arteries going to the brain are end arteries, and the infectious material being swept along until they reach the small end vessels, plug them with formation of thrombi, with necrotic destruction of the brain substances, supplied by the thrombosed vessels. The subsequent history of this process is brain abscess.

To the above explanation it seems, in the light of our present knowledge of immunity in infection, we might add, the slow absorption of toxins, elaborated by infections organisms, stimulates the natural defense of the body to increased activity, producing a larger supply of anti-bodies to a degree that renders the defences capable of holding the invaders in check, while nature is busily engaged in throwing up her fortifications in the way of proctive granulation and fibrous barricades.

One point in the etilogy of brain abscess as a determining factor, has not, it seems to the writer, been accorded the importance it deserves, and that is the sclerosing process that takes place in the mastoid cortex and cells, as the result of long standing, chronic aural supperation, while the inner wall and togmen of the antrum are found soft and necrotic. The infection here follows from mechanical reasons the lines of least resistence. The abscess may occur in any part of the brain, but the usual location is either in the tempero-sphenoidal lobe of the cerebrum or the cerebellum and generally found in close proximity to be necrotic bone.

Cerebral abscess is found in connection with necrosis, either of the tegmen of the antrum or tympanum, while cerebellar abscess follows labyrinth supperation, and sometimes sigmoid sinus thrombosis. There may be a thin layer of normal brain tissue between the diseased bone and the abscess, but in many cases the infection can be traced directly from the primary focus to the brain.

Symptoms of Cerebral Abscess.

Nothing is more indefinite than the symptomatology of cerebral abscess. These cases frequently exist for years in the latent stage of the disease, producing no symptoms.

Thus a brain abcess having its beginning in childhood may not become manifest until late in adult life.

Given, a case of suppurative otitis media, the symptoms of abscess usually found would be:

First. Headache. The headache varies in degree from a slight uncomfortable feeling to intense agony. As a rule, it is referred to the location of the abscess, but in not a few cases, it is diffused and has no localizing value.

Second. Vomiting. It is not as constant as headache, and frequently observed to pass through all the stages of the disease with no vomiting. When it does occur, it is of the projectile type. Vomiting occuring in the morning on an empty stomach is a significant symptom.

Third. Vertigo. This is not a constant symptom of abscess, in fact, is absent more often than present.

Fourth. Hebetude. The mental condition is rarely up to normal. Careful examination will, in nearly all cases, elicit slow cerebration, apathy and depression.

In others, irritability, confusion of ideas, and at times slight delirium, will be observed.

Fifth. Fever. This may be entirely absent, in fact, it is quite common to find the pulse retarded, and the temperature sub-normal while in other cases, they may run a slight elevation of temperature, but never the high temperature found in meningitis.

Eye Symptoms. Choke disc. and optic neuritis is sometimes seen where the abscess is of a large size, and rapidly increasing, but it is not observed here as uniformly as in tumor, in fact, choke disc is the exception rather than the rule, and neurutis when present must be considered rather strong presumptive evidence of meningitis.

Thus we are confronted with the fact, oft proven at autopsy that cerebral abscess may exist with most of the usually expected symptoms entirely absent.

Headache, vomiting and vertigo may be present, but this does not make the diagonisis certain, for all of these symptoms may be displayed in an uncomplicated otitis media. Fever, its presence of absence proves nothing. Sub-normal temperature with slow pulse, taken in connection with other symptoms, is strongly suggestive of abscess. Choke disc, when present is positive evidence of an inter cranial trouble, giving rise to increased pressure, but its absence, cannot be taken as proof that abscess is not present.

Paralysis of the sixth nerve, irregularity of the pupils, ptosis, and diplopia are all symptoms pointing to cerebral involvements.

In arriving at conclusion, the case must be closely observed, the history carefully analyzed, and then the only way to make a diagnosis, in a large number of cases, is to open up the mastoid and middle ear, look for suppurative tracts leading to the brain, and if necessary, expose and explore the brain.

With symptoms to warrant that an intra-cranial complication has arisen, leads up to the question as to what is the nature of the affection under consideration.

We are at once confronted with several possibilities in working out a true diagnosis from the manifest symptomatology. Thus we must consider and dis-

pose of purulent pachymeningitis, (subdural abscess) meningo-encephalitis, serusmeningitis, and leptomeningitis.

Pachymenigitis or subdural abscess is one of the most common complications of middle ear suppuration. In this involvement, there are no characteristic or definite symptoms by which diagnosis may be made before operation, as it has no focal symptoms. There is frequently pain and tenderness back of the ear, and a tendency to hold the head in a fixed position.

Purulent Meningitis. Here we find intense pain, usually high fever, rapid pulse, vomiting, obstinate constipation, retractions of the head, irregular pupils, convulsions and Cheyne-Stokes respiration.

In the diffuse form the diagnosis from abscess may be made readily, but in the circumscribed type, it may be very difficult, and in doubtful cases, lumber puncture will aid in clearing up the diagnosis.

To the careful observer, confusion in the diagnosis between abscess and meningitis will rarely occur, but, where the two conditions exist at the same time, it is more than likely that abscess will be observed by the violence of the meningal symptoms.

Serus Meningitis is a mild form of non-supperative inflammation, arising from aural supperation, and may produce all the symptoms of a brain abscess.

The symptoms are diffuse, the course is mild and recovery usually results. The course of cerebral abscess may vary from a few days to several years, with symptoms absent are so vaguse as to be of no practical value in establishing a diagnosis.

Cerebellar Abscess.

As a rule, abscess below the tentorium has more focal symptoms than cerebral abscess. The symptoms usually found in abscess in this location are vertigo, nystagmus, ataxia, early appearance of choke disc.

Here it becomes necessary to make a clear distinction; between cerebellar and purely labyrinthine suppuration. In either case we have, vertigo, vomiting, nystagmus, incoordination of muscular movements.

In labyrinth suppuration we find nystagmus horizontal, vertical or rotary, and composed of a long and a quick movement. The nystagmus is toward the diseased side until the function of the diseased side is destroyed, then it is directed to the sound side. The function of the labyrinth may be tested by syringing the suspected ear with cold water. If the vestibule is functionally active there will be with the head erect a nystagmus to the opposite side; if the vestibule is dead, there will be no response.

With the patient seated on a revolving stool, and turned ten times, will produce a nystagmgus in the same direction as the turning, but when the turning is suddenly stopped, the nystagmus reverses, and lasts from forty to forty-five seconds, and any departure from this for either ear, would indicate involvement of the labyrinth.

Neumann has formulated the following set of working rules by which to be guided in differentiating between labyrinth and cerebellar nystagmus:

First. Nystagmus toward the diseased side. This may be produced by the circumscribed labyrinthitis or a cerebellar abscess. If the labyrinth is not involved, the cold water test will demonstrate normal irritability. In another

class of cases the irritibility of the labyrinth cannot be demonstrated by the caloric test, but nystagmus may be produced by direct pressure or by the galvanic test. Under such a condition the findings furnish no diagnostic date before the surgical operation on the labyrinth. The radical mastoid in such cases is followed by labyrinth operation, after which, if the nystagmus turns toward the healthy side, it is positive proof that it was from the labyrinth, but, where the nystagmus continues toward the diseased side, after the operation, then there exists strong probability if its being a cerebellar abscess on the same side, for the destroyed labyrinth cannot prodnce a nystagmus to its own side. Nystagmus to the healthy side, with a dead labyrinth may be due to either labyrinth or cerebellar suppuration. If after the labyrinth has been operated the nystagmus subsiding with in two or three days, is proof that it was from the vestibule, but it is an intracranial involvement it does not subside after an operation, but increases, and may change its direction toward the diseased side. In such cases the indications are perfectly clear, that it is from the cerebellum. Vomiting is more frequently encountered, and more persistent than abscess above the tentorium. Headache is usually occipital.

Ataxia: In those cases involving the vermi form process, the characteristic ataxia is present, but, when the abcess is limited to the lateral lobes, this symptom is usually absent. To Babinski is due the credit of calling attention to several signs of cerebellar disease.

First. The patient in walking leans backward.

Second. If the patient while seated tries to rise without the assistance of his arms, the trunk and thighs become flexed, while the legs are extended. If the patient attempts to touch an object with his foot, the movement does not take place in the hip and knee joint at the same time, but follows each other in sequence. This sign is found usually only on the side of the lesion.

In cerebellar disease the inner rotation of one group of muscles is not rapidly followed by another, for example: the patient cannot change the position of the arm and hand quickly for pronation to supination. This is unilateral and found on the afflicted side only.

Vertigo should always be carefully studied. Transient vertigo that has no outward manifectations should be disregarded, as having no localizing value.

Vestibular vertigo produces the sensation of falling to the healthy side, thus labyrinth lesion of the right ear would cause falling to the left, with head in erect position. With the head turned to the left shoulder falling would be backward, if to the right shoulder it would be forward, thus we see with vertigo the direction of falling in vestibular irritation, changes with position of the head, while the vertigo and falling in cerebellar disease follows no fixed rule, and is not influenced by the position of the head.

Pointing Test.

This test, as worked out by Barany and others is a valuable sign in differentiating cerebellar abscess. The test is applied as follows:

The patient stands with closed eyes, facing the examiner, with the arm extended straight in front, with palmer surface up, the examiner presses the palmer surface of his index finger to that of the patient, who is told to let his arm drop to the hanging position at his side, and then to slowly elevate his arm and hand to touch the examiners' finger, which is held in the original position.

The normal individual can do this readily, or at least will only miss the object aimed at by a small fraction of an inch. This pointing behaves differently in vestibular irritation and cerebellar disease.

If the right ear for example is irrigated with cold water, there is developed a rotary nystagmus to the left, and the patient attempting to stand, will fall toward the right. Now, quickly while the nystagmus is still active in the vertical as outlined above, it will be found after locating the examiners' finger with his own, his hand on being lowered, will deviate toward the right, and on being elevated to connect with the examiners' finger, will still further deviate in the same direction. The deviation being opposite to the nystagmus induced, or in the same direction as falling. The loss of pointing accuracy in cerebellar lesions may be demonstrated as follows:

The patient with closed eyes, standing in front of the examiner the accuracy of pointing with both arms is tested separately. Suppose for example, that in the case of suspected lesion of the cerebellum, we find the right arm showing a decided deviation to the right, while the left arm points normally. This would indicate cerebellar disease, but, to be positive, it must be further distinguished from vestibular irritation. This may be done by syringing the left ear with cold water, this is followed by rotary nystagmus to the right, during which in a normal individual, both hands in pointing deviate to the left.

If now in the presence of a nystagmus to the right, the right arm still deviates to the right, while the left shows the normal defiation to the left under the present condition, we have a clear and absolute indication of lesion of the cerebellum corresponding to the side of the deviation. Thus we see the diagnosis of brain abscess is fraught with many perplexing difficulties, and in a large number of cases, the indications are so indefinite that an exploratory operation must be resorted to before a diagnosis can be made, while in still a certain percent of cases, the diagnosis is only made at autopsy, but new light is being daily thrown on this field, more exact observations are being made, new principles are being established, and it is within the range of human possibilities that this fearfully fatal disease will be so well understood and recognized early in the near future, that the death rate will be reduced to that of other surgical procedures.

My paper is already too long, the treatment is surgical, the description of which would make a full paper of itself, but I want to say in conclusion that evolution of modern surgical technique has and is changing the statistics of brain abscess, from one hundred percent deaths to forty percent recoveries after operation. This is an achievement of which we should not be ashamed to boast, and emphasis should be given to the importance of making the earliest diagnosis possible, that proper surgical methods may be employed.

"MATERNAL IMPRESSIONS."

Read at Fiftieth Annual Meeting of West Virginia Medical Association, Fairmont, Oct., 1917.

By Robt. L. Brown, A. M. M. D.
Parkersburg, W. Va.

This is a subject in which the profession and laity have always been interested, and it certainl 'is a subject in which there are quite a number of

opinions entertained. The first mention we have that has any bearing or apparent bearing on the subject is to be found in the thirtieth chapter of Genesis beginning at the thirty-seventh verse. It is too long to quote, but in substance says "That the cattle brought forth young ring-straked, speckled, and spotted—because when they mated they looked upon the green poplar, hazel and chestnut bushes—that Jacob had piled white strakes in and placed before them in the gutters of the watering troughs." I take it for granted that the superstition began at that time and has continued especially among the laity ever since.

Gentlemen, I hope you will be patient for of necessity my paper is longer than I would from choice have made it. It has taken some time and no little work in compiling, arranging and bringing to your notice much of the literature in brief bearing on the subject, and we will draw deductions and conclusions.

Let us first consider the relations of Anatomy and Physiology of the mother to the child.

As soon as fecudation has taken place the uterus prepares a bed for its reception by a hyper-plastic development of its inner membrane.

After the ovum reaches the uterus it falls from the opening of the Fallopian tube into a fold of the mucus membrane and at once becomes attached there, thus forming the dedidua flexa; the chorian villi are formed for the purpose of absorbing the material furnished by the uterine glands which come from the cells of the mother for the nourishment of the embryo, during the first four or five weeks of pregnancy.

It is not until the third month when the chorian villi have become developed that the chorion and decidua unite; near the middle of the third month more than half the villi of the chorian become atrophied, the remaining portion becomes hypertrophied and form the foetal placenta.

We have seen up to the middle of the third month the foetus has been nourished by material furnished by the uterine glands, and absorbed by the chorian villi.

This means is now insufficient for the nutrition of the embryo. Nature comes to the rescue and the chorian villi becomes enlarged and develop into the foetal portion of the placenta and being surrounded by the corresponding portion of the membrance of the uterus, bathed constantly in a stream of blood in the sinuses of the maternal placenta.

No interchange of blood occurs at any time between the foetus and the mother. From "Ercoloni" we learn the vessels of the mother never anastomse nor do they come in immediate contact with those of the foetal placenta.

No nerves or lymphatics exist in either portion of placenta, there are no nerves, capillaries or lymphatics in the cord.

We shall mention several cases which furnish evidence of maternal impressions being conveyed to the foetus in utero and causing its deformity.

The first two cases from Dr. Wm. Hammond:

A lady in the third month of pregnancy was very much horrified by her husbang being brought home one evening with a severe wound of the face from which the blood was streaming; the shock was so severe that she fainted, and subsequently had an hysterical attack during which she was under my care.

Soon after her recovery she told me

that she was afraid her child would be affected in some way.

In due time her child, a girl, was born. She had a dark red mark upon her face corresponding in situation and extent with that which had been upon her father's face.

Case 2d. A lady during her pregnancy dreamed that she saw a man who had lost a part of the external ear. The dream made a great impression on her mind and she mentioned it to her husand. When the child was born a portion of one ear was deficient and the organ was exactly like the deficient ear she had seen in her dream.

Prof. Carnochan of New York gives an account of a case of hare lip which he says "They have no doubt occurred from maternal impressions conveyed to the foetus by a dentist who roughly lifted the mother's upper lip at the sixth month of pregnancy."

Dr. Dalton says "It is through the medium of the placental circulation that these effects are produced on the nutrition of the foetus which result from sudden shocks or injuries inflicted on the mother."

We know how readily nervous impressions disturb the circulation in the brain, lungs, face, etc., and almost every day we see examples of disturbed uterine circulation in cases of amenorrhoea and menorrhagia.

"As the nutrition of the foetus is supplied wholly by the placenta it will suffer from any cause that disturbs the placental circulation. (Human Physilogy 4th Edition, Page 617). It is asserted by Dr. Segrim that "Impressions will reach the foetus, cut off its legs and arms and inflict large flesh wounds before its birth inexplicable as well as indisputable facts."

This from the earliest period of history was a settled belief among the laity of all classes.

These ideas remained until the time of "Bichat" who made advances in philosophical and analytical anatomy, he promulgated a new theory, which is that of arrest and retardation of development.

Arrest of Development.

We will note the folowing cases to illustrate their etiology. Case 1st. Child female; seven months; acephalous. The entire scalp, the integument over the spinal column with the lamina and spinous processes of the cervical and dorsal vertibrae were wanting, adominal parietes wanting, exposing the liver in situ, covered only by peritoneum. Several coils of intenstine extruded (Trans-Obstetrical Society of London).

Case of Dr. Gretchell: Mother aged nineteen first birth, child born alive, lived half an hour; besides having club feet and spina-bifida, it had all the adominal organs outside the abdomen, covered only by serous membrane, it had no anus or genital organs, the mother could give no cause.

Again we learn from the American Journal of Science that a child born had six toes on each foot, is second of a family of nine children, the fifth had a small toe hanging from the great toe.

We know that arrested development of the maxillary processes causes hare-lip. Acepalous foetus results from embryonic hydro-cephalous, the cerebral vesicles becoming distended until rupture takes place. Spina-befida results from the failure of the dorsal plates to unite; arrested development affecting these plates do not of necessity interfere with the development of the abdominal viscerae, so the liver, kidney, spleen, bladder and alimentary canal often obtain their normal development and po-

sition but from failure of development of the abdominal plates they remain uncovered except by peritoneum.

We call your attention to this point, if the emotions of the mother ever effect the foetus so as to cause deformity this must be done at or before the time at which the deformed part is undergoing evolution.

We know that by the 14th week the maxillary processes with their soft parts united forming the upper lip, and yet in the case of Dr. Cornachan previously noted the deformity is attributed to the dentist, who roughly handled the mother's lip during the sixth month of pregnancy.

The process of evolution may be excessive, when excessive in portions of the capillaries these blood vessels which are in the normal state too small to be seen by the naked eye, now become so large as to carry red blood and to impart to the skin a degree of redness; this is the way marks are formed, it is this excessive development you are so constantly coming in contact with and which are pointed out to you as marks of fruit, etc., for which the mother had a desire while pregnant.

Experience has taught us that these aneurisms by anostomosis as well as super numerary fingers and toes are transmitted from generation to generation.

Intra Uterine Amputations.

Deformities from this cause are perhaps more frequently pointed out as the result of maternal impressions than any other It is almost certain that these deformities depend on diseases of the membranes enveloping the foetus. Dr Montgomry first showed that it was possible for these amputations to take place from amniotic bands. He has reported 28 cases illustrating nearly all the varieties of this deformity and he believes that in nearly all these cases inflammatory action obtains in the membranes which result in adhension to the skin of the foetus by means of organized lymph.

Enough has been observed to lead us to belief that the real cause of these amniotic bands are certain diseases of the uterus or its membranes or indeed traumatic influences may in most cases account for them.

From the foregoing the following facts seem to be established. That during foetal life, certain parts may be hindered or arrested in their development, while other organs not directly connected with them may continue to grow to full development.

That ecropic viscera of the abdomen, spina-befida, cleft-plate, hare-lip, webbed fingers and toes, etc., are only evidences of the arrested development of embryonic, abdominal, spinal and maxillary processes.

That anything causing arrest of development of any portion of the foetus must operate before the evolution of the part.

That the causes of arrested development may be either local or general injuries to the mother's abdomen, diseases of the uterus or its membranes, hereditary transmission.

That excessive development of parts of the foetus may obtain resulting in naevi, aneurisms by anastomoses, super-numerary fingers, toes, etc.

That these peculiarities are frequently transmitted from one generation to another.

That intra-uterine amputations result from amniotic-bands placental adhesions, fracture, or from pressure of a loop of the umbilical cord.

That amniotic bands or placental adhesions may result from inflammation of

the uterus its decidua or inflammatory disease of the foetus.

That amputations may be caused by these false membranes which may afterwards be absorbed so also the amputated limb.

There are established laws that seem to account for Double Monsters which I do not have the time or inclination to present to you at this time, but will gladly discuss with you on some future occasion.

After considering the above facts the subject comes to this issue. Can the mother's mind so act on the foetus in utero as to cause its arrest in whole or in part and produce its resulting abnormities Can the mother's mind produce the disease of the uterus or its membrane which result in false bands or placental adhesions which cause amputation and other deformities? Can such impressions cause the umbilical cord to encircle and amputate a limb or cause the death of the foetus?

Is it possible for maternal impressions or influence to destroy or deform one foetus in utero, while another enclosed in the same membrane is uninjjured?

A large percent of congenital deformities shown to arise from local and other causes which have no connection with maternal influence, is it possible that at another time exactly the same deformity is produced by maternal impressions?

Remembering that no connection exists between the the embryo and the mother, that there is no direct blood communication, that the mother's mind can have no influence in causing the pathological states which have been shown to be the cause of the malformation, that during the first weeks of foetal life, the ovum is surrounded by anatomical conditions which preclude maternal influence.

When we remember these facts, it cannot be believed that the mother's mind can change the conformation of the foetus in utero.

Again, Providence has not left the development of the human foetus to the influence of maternal whims and caprices to an intuitive metamorphic power which would result in foetal reproductions of every object which impresses the maternal mind with horror and disgust.

We cannot but admire the provisions that have been made to shield it from such influences.

Until the second month of pregnancy the ovary is loosely attached to the uterine decidua, and to my mind, it is not reasonable that the mother can influence the foetus at such a time and under such anatomical conditions.

After the formation of the placenta, these protective conditions still obtain for the vessels of the cord and placenta have no vaso-motor nerves thus shutting out the influences of the mother's mind. Facts confirm this reasoning, look at the frequency of mental impressions of the mother and the scarcity of any sort of deformity.

In 1200 cases observed, all of whom expressed a fear of deformity, some of the mothers naming what was expected, only 3 cases occurred and in no case was the prediction of the mother verified.

Wm. Hunter, the author of "The Anatomy of the Gravid Uterus," made inquiry of 2000 cases; in no case did the abnormal development correspond to the mental emotion.

It is now known that every form of monstrosity found in the human race has its analogue and in fact occurrs more frequently in th lower animals than in man, now if we ascribe these

abnormities in the lower animals to impressions made upon the brain of the mother, the argument ceases, for, we know that it makes no difference whether the hen hatches her own eggs or whether it be done by another fowl or animal or even by artificial heat, chickens will always be the result.

Again, in the case of the eggs or fish, development goes on without regard to the mother who deposited them, provided they are supplied with proper light, heat, etc.

In both the eggs of fish and fowl, thus incubated or are developed, all the known monstrostrosities occurring in man.

If such deviations be so in fish and fowl precluding maternal influences, how then is it possible to ascribe them to such influences when occurring in the human race?

THE CO-OPERATION OF GENERAL PRACTITIONERS, SANITORIUM, AND PATIENT IN THE FIGHT AGAINST TUBERCULOSIS.

Read at the Fiftieth Annual Meeting of West Virginia Medical Association, Fairmont, October, 1917.

By S. A. Slater, A. B., M. D.
Supt. Grand View Sanatorium, Oil City, Pa.

It is with a degree of pleasure that I can return to the State where I first practiced medicine and appear before the first Medical Society of which I was ever a member to read a paper I trust will be of value in the fight against the Great White Plague.

World events which have taken place in the past three years and still occupy a most prominent place on the stage of human events have been so closely brought to our attention recently when our own country entered the conflict I fear there is a tendency to neglect some of the important things that are taking place in our midst. This should not be the case for not only must our endeavors be maintained but increased in order that lives lost on account of preventable disease might be saved to help take the place of those sacrificed on the blood drenched battlefields of Europe. No doubt the great War, horrible as it is, will do much to stimulate the fight against Tuberculosis and hasten the day when this dreadful disease will be conquered. The horrors of Tuberculosis is second only to the great War and while it is looked upon too lightly as being only a matter of common occurrence which cannot be controlled, it should be dealt with differently and every means used to overcome it, for it is decidedly less considerate than even our enemy the Germans, it is no respector of persons and there is no flag of truce to retreat behind for protection. It most frequently takes men and women in early manhood and womanhood, when they are of the greatest value to the state and nation, and there is no Exemption Board; it does not consider the fact that its victim might be leaving a dependent family, and no pension is provided. It has been rightly called the Disease of the Masses and while it is more comon among the poor and those who live in close and unsanitary surroundings, its victims are from all classes and ages.

The subject which I have chosen for my paper is one which I tackle with a certain degree of hesitation. It is extremely difficult to present facts which will be in harmony with the ideas of every one, and while it is not my intention to be antagonistic, I will endeav-

or to present my views for the mutual good of all. If anything should be said which seems unreasonable or unfair please remember that I was at one time a General Practitioner and very likely if you were in my place you would feel as I do. We all make mistakes and I as a General Practitioner made many in the proper handling of my tuberculosis patients, some of which I will mention later.

The greatest good can come only by co-operation and very little can be accomplished without it in the fight against a disease universal as is Tuberculosis. The position the general practitioner holds is most prominent and important. He is the one who first sees the patient when an early diagnosis means so much, and he is the one whose counsel and advise the patient will accept whether for good or bad. He also holds a very unique position for he is often looked upon as the leader of the community in which he resides. It is not only for medical advice that he is consulted, it may be legal, religious, business, political, and even criminal advice which may be sought. Certainly one holding such an important position in the eyes of the people can do much good or harm as he sees fit. This unique position places him where he can be a most important factor in the Tuberculosis campaign. Now the question is, how can the greatest good be done not only to the individual patient but to the community. The situation is such that it should be handled to do the greatest good to the greatest number. An early diagnosis is most important for a successful campaign against Tuberculosis for on it depends the success of treatment and prevention of it spread. This cannot be too strongly emphasized for without it the patient drifts on to the hopeless or far advanced stage and in the meantime has infected many others. It must be realized that in the early stage the disease is curable (the most curable of all chronic diseases) and in its incipiency the patient is not a great source of danger since he does not throw off the germs in large numbers.

It should always be thought of by the general practitioner in all cases where the diagnosis is difficult and he should not be satisfied until Tuberculosis has been ruled out. Its symptoms often simulate those of other diseases, at times making the diagnosis most difficult. Even when every precaution has been taken many cases will have reached the moderate or far advanced stage before the real condition is recognized.

The early diagnosis having been made (the importance of which cannot be too strongly emphasized) the next thing is what is going to be done with the patient. The first thing is to tell him frankly that he has the disease, for this is absolutely essential if you are to get the patient's co-operation. There is no reason for not telling him his real condition for he will find it out sooner or later and when he does he certainly will have a contempt for the physician who knew it and would not tell him. It is absurd to say "I am afraid to tell patient for I feel that he would give up and die." Which is better to tell the patient the real truth and impress upon him the importance of doing the right thing to regain his health or let him drift on in ignorance and to an untimely grave but in the last weeks to have him say "if my family physician had only made an early diagnosis or told me the truth I might be well today." That is what is often heard and many more die feeling that way than unkindly toward the physician who told them of their real condition early when they

could recover. Unfortunately it is hard to make them realize the seriousness of the trouble and unless it is thoroughly explained to them they will never see the importance of giving the proper co-operation so necessary in the successful handling of the case. How would you like to live with an open case of Tuberculosis who did not know he had the disease and took no precaution? This is what you are compelling the family and friends to do when you do not tell him and see that he takes the proper precaution to prevent the spread of infection. Even if he were frightened to death on being told the truth, what would this be compared with the suffering he may causee by infecting others. He can be told without being injured, and in a way that will not only benefit him but protect those with whom he associates. I want to emphasize the fact that a careful and conscientious consumptive is not dangerous. It is the one who does not know his real condition or who is careless that is to be feared.

After telling the patient he has the disease the next thing is what should be done that he might regain his health. Many things have to be considered before any definite advice can be given, but the physician should be in a position to help patient do what is best. Different physicians have different ideas all of which may be good but none of which will apply to every case. Some patients will do best by being sent a distance from home, others will do best in Sanatorium near home; some are suited for one Sanatorium and others for another, still others will have to be treated in the home for they will not consider leaving it on anyone's advice. Here is where the physician can be of the greatest value and can give most valuable assistance. Unquestionably the Sanitorium is the best place to handle Tuberculosis for there the patient is handled under conditions favorable for the best results. If he is to be sent to the Sanatorium it should be in the early stage of the disease for an institution is no more nor less than a training school for the Tuberculous. Here they are taken and given instruction in how to live, what precautions to take, and impressed with the importance of doing the right thing, in the right way and at the right time. After this has been well drilled into him he can return home and live under the direction of his home physician without renewed activity of the disease. Instead of feeling that you are losing a patient by sending him to a Sanatorium, you should feel that you are sending him only to be instructed so that he will be easier to take care of than if he had not been impressed with the importance of the proper care of himself in order that he may retain his health. On his return home he will not only be much easier for the physician to care for, but he will be an important factor in the fight against Tuberculosis. He will impress upon suspicious cases the importance of an early diagnosis and urge them to seek medical advice and should the disease be present they can be of help to the physician in convincing the new patient the importance of doing the right thing in the right way at the right time. Every Sanatorium has ex-patients whose influence has brought other patients to the institution. It may be the patient has a desire to go West, on the other hand he may want to enter an institution nearer home; it is important that the patient's wishes should be considered in this respect for he will do better in the place he had rather be and where he will be most contented, it matters not whether it be in the distant West or

near home, whether in the most expensive or the charitable institution.

It is foolish to send a patient West thinking the climate and change will cure him if he is going to die of homesickness, or worry over financial difficulties. The reverse is true, it will do a patient no good to place him in an institution near home if he thinks only the West or a decided change the thing that will benefit him. The physician can help him decide, and should make every effort to place him where he will get the most benefit. The telling of a patient to make a change or go to the country where there is plenty of fresh air without any definite advice, is deplorable. When one has active Tuberculosis—no matter how early the case may be—he is suffering from a serious disease and should live only under the advice of a physician, certainly, until the disease is arrested. Climate alone will not cure the disease but it is the living of the proper life under the best conditions that will bring results. I will admit that I, like a great many general practitioners have been guilty of being satisfied to tell a patient he should go to the country or to make a change if he wanted to improve. It is useless to say the patient rarely permanently improved, so in the future I trust none of you will be guilty of this mistakes which means so much to the patient. If with the change the patient cannot be under the advice of a physician, keep him at home and treat him yourself. Better results can be gotten at home under the proper conditions and instruction than can be gotten in any climate without them.

The Golden Rule works well in Tuberculosis and when a physician advises a patient he should have that in mind and ask himself if he had Tubersulosis, would he be satisfied with the advice he has just given. Supposing you had Tuberculosis and wanted to enter a Sanatorium, do you think you would feel very kindly toward the physician in whom you had the most confidence if he could not give you some assistance? Such is often the case and I will venture to say there are physicians practising in this State who do not know it is maintaining a Sanatorium for the care of its Tuberculous. Every physician should become acquainted with several different Sanatoria which might be suited to different classes of patients. There are expensive private Sanatoria, semi-private where the expense is moderate and the free institution. Your own State has a most excellent institution where it can care for a part of its patients at a moderate cost. There are semi-private and private one in this and neighboring states where patients can be cared for who do not care to enter the State institution. The patient who desires to enter a Sanatorium will appreciate any information a physician can give him regarding same. He should also be able to give patient some idea of how a Sanatorium is conducted, what will be expected of him, etc.

The Sanatorium as a factor:

A great many physicians and patients seem to think it is necessary to be very sick before entering the Sanatorium should be considered. The contrary is true and for the Sanatorium to do its greatest good, the patient should be admitted in the early stage of the disease. Don't think of the Sanatorium and the Tuberculosis Hospital as being the same; the former is for the early or favorable case and the latter for the far advanced or unfavorable case. The Sanatorium is really a training school for the tuberculous; here they are taken and taught how to live, the importance of doing the

right thing and made to realize that with the disappearance of symptoms the disease is not cured. After the patient has been thoroughly convinced of the importance of what has been taught him he can return home and live under the direction of his home physician without renewed activity of the disease. It not only teaches the patient how to take the proper care of himself for his own physical good but he is also taught to take the necessary precautions so that he will not be dangerous to those with whom he may come in contact although he may still harbor active disease. The greatest need of the Sanatorium is to have the support of the general practitioner who finds the cases early and sends them for treatment. The following taken from an article by Knopfl is most excellent: "We all know that the successful treatment in the home of the patient, while feasible in some instances is impossible in many. And yet upon the early discovery and prompt treatment of the Tuberculous invalid at the right time and in the right place depends in no small degree the solution of th Tuberculosis problm."

I do not approve of the methods used by many Sanatoria that patients can be admitted only after being examined and having been recommended for admission by certain physicians designated as Sanatorium examiners. The physician who is really interested in his patient will not want to turn him over to another physician before even a recommendation for admission can be secured. The Sanatorium should have an application blank so gotten up that when it is properly filled out by any truthful and honest physician, one can tell whether the patient is suitable for admission where application is made. To make every physician feel he is being relied on to make an early diagnosis and his recommendation is considered as good as that of the other fellow then he will wake up and begin to take a greater interest in the work. Little should any one blame the general practitioner if he keeps patient under his own care rather than send him to some one else often at great expense to be examined not knowing whether he will be allowed admission. How much better the physician would feel and easier it would be if he could fill out a blank and send it in to the Sanatorium. If the patient should be refused admission because he is too far advanced or otherwise unsuited, don't be offended, the Sanatorium does not blame you; often patients are far advanced before consulting a physician. Bear in mind that the Sanatorium map accept very early cases, and if they are prepared only to care for this class, see how unforunate it would be not only for the patient himself but the early cases already undergoing treatment would not remain should the far advanced be treated with them. Again the Sanatorium may not be at all situated to care for the far advanced. Here is where having a thorough acquaintance with the institution proves of the greatest value for then you can select the one best suited for patients whom you desire admitted.

Together with application of patient it is well to write a brief history of the case, this is always appreciated by physician in charge and gives the impression that you are really interested in the case and not sending him with the feeling that you are glad to be rid of him, as apparently, is often the case. As soon as a study of the patient has been made the Sanatorium should write the home physician what has been found, tell how patient is doing, whether contented or not, and give a guarded prognosis. Fol-

lowing this the monthly reports should be sent stating what progress patient has made and if a change is advisable the home physician should be consulted. When patient is discharged he should be told to return to his home physician and remain under his care so as to avoid any future break down. At the same time a letter should be written to physician advising him of patient's condition on discharge, what advice had been given him, and making suggestions which might be of assistance in the future handling of the case.

This co-operation between the Sanatorium and physician is of the greatest importance. Until it takes place they will both be at a disadvantage and the greatest good will not be accomplished in the fight against the Great White Plague.

The Co-operation of Patient.

Unless the patient has a natural inclination to follow instructions and lend every support to physicians and Sanatorium, the time spent under their care is wasted. If he desires to recover, a most important thing is for him to go at it with a determination, feeling only that he is going to win. Another thing necessary is to place himself under the care of a physician in whom he has the utmost confidence. This having been done he should follow his advice and instruction to the letter, even though discouragements may overtake him at times and the chance for recovery seems dark, he should stick to it and in the vast majority of cases results will be obtained. I know of no disease where the physician can accomplish so little without the patient's support for without it the patient will not improve, neither will he take the precautions necessary to prevent being a source of danger to others. Having a patient desirous of regaining his health who has patience and determination to fight and who will lend every assistance, results can be obtained in excess of the most optimistic expectation. The physician should not expect this until he has told patient the real nature of the disease and have it thoroughly explained to him, also why he should be willing to take every precaution to prevent the danger of infecting others with whom he may associate. It is not usually hard to get the patient's co-operation when he is properly handled. Some have a feeling that taking care of the tuberculous is an extremely difficult and unappreciated undertaking, it may be for some but if the patient is only met half way the task becomes less difficult. First his confidence will have to be gained and as long as the physician can hold that he will have the patient's co-operation. In no disease does effect of mind over body have as great an influence as in this one. If the patient can be only made to feel that he is in the right place, having the proper advice, and under the care of the right physician, he will do nicely.

With a closer study of the disease the physician would realize the importance of taking care of it in the earlier stages. The results obtained in the properly handled cases would be sufficient to stimulate a greater interest in the work. I do not feel that every patient should be placed in a Sanatorium but I believe that the Sanatorium offers the best chance for recovery to greatest number. Some will do better at home, this is due to the fact that certain patients are not willing to leave for anything and to take them away against their will would only cause them to worry which would do more harm than Sanatorium could possibly do good. The same is true of sending a patient away to a distant part of the country

in order to obtain a better climate. No climate will cure the disease if the patient is going to worry from one cause or another. The physician cannot give definite advice in regard to what is best for his patient to do but he can certainly help him decide and when that has been done the patient could be made to realize that it is not the change of climate or the Sanatorium that will cure him but it is the doing of the right thing in the right way matters not where this may be. The patient who does the right thing at home (takes the cure as he should) has a better chance to recover than the one who takes no care of himself, whether in the Sanatorium or the best of climate. It is however much easier for any one to do what is right in the Sanatorium for there the routine life usually practiced by all is not a burden to follow. At home every one but patient is living the life of healthy people and for one to undertake to live the life necessary for recovery is a difficult and often a disastrous undertaking.

Let me urge upon you to take greater interest in the fight against Tuberculosis, not only in its diagnosis and treatment but in every movement which has for its aim the control of this preventable disease which claims 150,000 citizens of this country annually. Try to avoid having any one say in their last days "if my physician had only known more about my trouble I would be well today." Do what you can, not only for the good of the individual but to protect future generations from the Great White Plague. It will not only be a credit to your ability but an honor to the profession whose greatest reward is the control of disease and relief of human suffering.

In conclusion—

1. The early diagnosis of Tuberculosis is of the greatest importance in offering a chance of cure and to prevent the spread of disease.

II. The general practitioner will always be a most important factor in the Tuberculosis Campaign.

III. While the Sanatorium is the ideal place for the treatment of tuberculosis it is not suited for all cases.

IV. The important thing for recovery is to do the right thing at the right time whether it be in the Sanatorium or in the home.

V. The co-operation of the Physician Sanatorium, and Patient would be to the mutual advantage of each and would result in a more successful fight against the Great White Plague.

1 Knopf—Medical Record October 10, 1914.

THE PHYSICIAN'S DUTY TO HIS COMMUNITY

Read at Fiftieth Annual Meeting W. Va. Medical Association, October 1917.

By Harold B. Wood, M. D., Dr. P. H.
Assistant State Commissioner of Health.

From time immemorial every community has regarded itself fortunate when having a minister and a physician to guard and to determine its destinies. Members of these two professions have been considered as indispensable assets for the welfare of every collection of people, for their guidance and protection. They are frequently held as having special missions to fill and, among primative peoples, were each supposed to possess supernatural powers and to be superhuman selections for their special missions. When either falls short of his

trust the deepest gloom spreads over his neighborhood, and faith in mankind receives a serious check. And so, even now do people place an extraordinary confidence in their physician, explicitly believing he possesses special powers of the determination of causes and methods for alleviating and preventing human discomforts.

The duties of a physician comprise the treatment of the sick and injured, and the safeguarding of the individual from future dangers. The protection of the individuals collectively becomes through the co-operation of the patients, their physicians and the health officers. The first duty of a physician upon making a diagnosis of any communicable disease is to take immediate steps to prevent the spread of the disease to other members of the same household and to the general public outside.

To protect the household the patient is given that isolation which will break the circuit of transmission. With typhoid fever, immunization of the entire household should be insisted upon. The acting nurse should be instructed to thoroughly wash her hands before handling any food, no matter what the disease. The disinfection of bed linen, of nose and throat discharges and of body evacuations should be insisted upon by the physician. The other members of the household should be instructed in the diagnosis of early cases of the disease, of any communicable infection, being told the early symptoms so that upon the appearance of these, other members of the family may be effectually isolated at once and receive early treatment.

All body discharges of typhoid patients must be disinfected or the heavy toll of typhoid deaths in this state will continue. At the little town of Penmar a case of typhoid appeared last year. The attending physician failed to notify the family to sterilize and to bury the typhoid wastes. The mother threw them upon the surface of the ground. They washed down into a spring upon which the entire town was dependent. Soon eighty per cent of the homes in the entire town was involved with typhoid. A sterilization of the spring by the representative of the State Department of Health and a supply of chloride of lime given each family having typhoid caused an immediate termination of the outbreak. Any physician could check any disease which is transmitted in a similar manner.

For the disinfection of typhoid body discharges bichloride of mercury and copperas are useless. Carbolic acid when used is usually prescribed in too small amounts. If to the fresh warm evacuations boiling water is added to the quantity of three volumes efficient sterilization is obtained. Prausnitz demonstrated that a cupful of fresh unslaked lime followed by one cup of hot water will sterilize the stool. It is doubtful if milk of lime or slaked lime has any effect whatever in killing the typhoid bacilli. Experiments tend to show the unreliability of white wash when used for this purpose. Chloride of lime is the cheapest and most satisfactory disinfectant. One tablespoonful of fresh chloride of lime is moistened into a paste with the same quantity of water. This is added to one quart of water and is kept in a covered preserve jar or bottle. A teaspoonful of washing blueing is added as a warning signal. One tablespoonful of the solution will disinfect and is added to both bowel and kidney discharges.

Isolation, as applied in the control of communicable disease, is a relative term, and should be used in conjunction with

only susceptible persons and to the various agents by which infections are carried. It is an advantage to the patient to be isolated, since mixed infections will be lessened and the patient is saved the annoyance of undesirable sympathy and prolonged conversations which tend to raise temperature and increase mortality. Isolations, therefore, become a therapeutic measure which should be insisted upon. "Rest in bed" as prescribed by text books as the first consideration of treatment for typhoid and other infected patients means definite and entire 'rest', and not simply the reclining position. Yet how often one finds entire neighborhood gloating over the misfortune of the helpless in their presence, thereby not only dragging down the patient's vitality, but exposing others to the same infection. It would be better for all concerned if on the house of every case of an infection or serious illness would be posted a placard stating that a dangerous or infectious disease exists therein, that people must keep out, that sepecial rules and quite must be observed.

Judgind from the frequency of contact cases of the infectious diseases which occur within the same household, it is evident that physicians do not sufficiently impress upon the family the methods by which the diseases are transmitted and the necessity of adopting strict measures to minimize this danger. If the contagious diseases were more universal placarded we woul have much less of them, as placarding has a marked effect to induce people to observe strict isolation. The public has a right to know where danger lurks and as every city insists that dangerous holes in the street pavement be distinctly marked with a red lantern, so should all the cities insist that all households harboring cases of dangerous infectious disease, including measles, whooping cough and typhoid fever, should be conspicously placarded as a warning. While doing considerable traveling over this state I have very rarely seen any disease placards, even in towns where outbreaks were known to be present.

Most diseases which are reportable are placardable. Any physician has a right to post a notice on the house of his patient that a case of one of the placardable diseases exist therein, giving the name of the disease. Any physician who does placard his houses performs a public duty of great value to his community, and he should be commended. If, however, the health officer disagrees with the diagnosis he has the legal right to post a notice of the disease he considers the infection to be. In case of disagreement, the family or the family physician can always appeal to the State Department of Health. In adjusting such differences the protection of the general public is held to be of paramount importance.

For the protection of the public against the spread of the disease, the physician should make a complete and immediate report to the local health officer. Particular people are quick to observe how quickly or how negligently a physician performs his public duty, and they believe if their doctor tries to prevent their infection spreading to other households their physician will also be just as careful to keep other infectious diseases away from them. The careful performance of a public duty is an asset of value. The notification of a reportable disease should state the name, age, sex, definite occupation and exact location of the person, together with the name of the disease. With cases of typhoid fever, scarlet fever or diphtheria, if milk or other foods for sale are pro-

duced or handled by the household the fact should be reported to the health officer, but the physician should warn the members of the family to discontinue at once the sale of milk or other foods.

Diseases are made reportable for the purposes of knowing the sanitary needs of a community and for epidemiological purposes to track and suppress outbreaks. A captain at headquarters can not win an engagement by merely studying a map. He must have active men in the trenches who respond to their country's needs and who send reports to headquarters of what advances they have made or what dangers they have met. These men at the guns can not see the entire field and can not, of themselves, map out a campaign for action in distant lands. The development of the public health and the control of communicable disease is based upon similar plans. The state of West Virginia will never attain its rightful place in the Union until it fully operates its effective plan for reducing its enormous morbidity and its high death rate. No plan can be developed economically or to the best advantage unless the physicians individually are willing to protect their patients, their homes and their state by co-operating in the general work of promoting the public health. It is absolutely essential to the welfare of this state, and to your individual patients, that the presence of reportable diseases be made known. Typhoid or any other disease can not successfully be fought unless the cases are completely reported, and the exact location be given. The physician who fails to report a case of typhoid occuring on a dairy farm, giving the entire information to the local health officer, is a public menace. The health officer who receives such a warning of impending danger and does not act at once is also falling short of performing his public duty. It is rare that a physician will refuse to respond to an urgent call, even though a charity case. It seems not uncommon for a health officfier to neglect a public duty, his excuse being insufficient remuneration.

The reporting of diseases is becoming better each month but the reports are extremely incomplete. Some of our best physicians make no reports, and no reports whatever have been received this year from Cabell, Pleasants, and Pocahontas counties and scarcely any from Braxton, Calhoun, Doddridge, Gilmer, Jefferson, Logan, Mason, Morgan, Nicholas, Preston, Putnam, Raleigh, Randolph, Wayne, Wetzel, Wirt, and Wyoming counties.

The early and complete reporting of all births and deaths by physicians is a duty to their patients of the first magnitude. Every record of a birth or death which is made by an assessor is of doubtful legal value since it is not made by a witness but merely by hearsay. Any report of a death made by an undertaker is apt to become a serious reflection upon the professional ability of the attending physician, and may be used in court to produce a legal embarrassment to the doctor. It is for the doctor's protection that he himself sign every death certificate of his patients. It is necessary for the legal protection of his patients that the attending physicians sign all birth and death certificates. There have been numerous legal entanglements based on military eligibility and caused by the failure of physicians to record births. When a person fails to obtain his desires and rights, failing through his inability to prove his brth, his physician might be held liable and be forced to recompense his patient. There is scarcely a greater disappoint-

ment than that occasioned when the faith that protection has been secured, suddenly becomes shattered, and the hopes of a life time are discovered to have been without foundation. This faith in one's physician is destroyed when too late the patient and client is found without legal protection. At the time of a death the family place themselves entirely in the hands of their physician, feeling confident that he has tried every known remedy for saving life and that he also has legally guarded and protected the heirs. How great has this confidence become and how often is it betrayed! A physician who does not promptly record a death, giving a complete description of the family connections of the deceased, with an exact and acceptable disease or violence as the cause of death, is a traitor to his trust. Few there be who are not guilty in West Virginia. It is sad but true.

A correct and complete record of a death is frequently an absolute legal necessity. Such records are often required in order to obtain insurance, to settle estates, to prove the absence of inheritable disease that the descendants may obtain insurance on themselves. Such records will prove citizenship, a vastly important problem in time of war. Such records prove parentage which is often necessary to establish inheritance — one of the demands as a result of war.

The general public is beginning to appreciate the value of legal records of births and of deaths. The public understands the intent of preventive medicine in all its phases. It is appreciating that the need of a physician often lies beyond the scapel, the prescription blank or the bottle of ready-made pills—that doctors are here to teach and to help them live longer, happier and more efficiently, and they expect their family physicians will teach, will guard and will protect them legally and from preventable diseases.

PYELITIS

By H. G. Camper, M. D., Welch, W. Va.

I am prompted to write upon this subject, because of the number of patients who have applied to me within the past three years suffering with this disease, in whom a diagnosis had been made in some cases, and might have been made in others, of such conditions as nephritis, gall stones, kidney stone, floating kidney, cystitis, tubercular kidney, typhoid fever, pulmonary tuberculosis, psoas absess, lumbago and appendicitis.

Pyelitis, a condition which occurs frequently, is often overlooked, and always tends to become a chronic infection. It is not confined to either sex, or to any age. My youngest patient has been a child of nineteen months. My oldest patient, and one of the most severe cases I have seen, occurred in a woman sixty-eight years of age. There may be said to be two causes for pyelitis: First, the successful invasion of the epithelial cells lining the pelvis of the kidney with infectious bacteria; Second, certain conditions which predispose to this infection.

Of thirty-four cases treated by me in the past eighteen months, the following bacteria have been found: Colon bacilli in twenty-two; staphylococcus in five; colon and staphylococci in four; micrococcus catarrhalis in two; and staphylococcus and an undentified baccilli in one. These examinations were made from catherized specimens of urine drawn in a sterile bottle, after the bladder had been emptied and irrigated,

and allowed to stand for one hour. A drop of urine was taken from the bottom of the bottle by means of a sterile pipett and placed on a sterile slide. This was evaporated and stained in the ordinary manner and examined with oil lens.

Of the predisposing causes, the female is more frequently affected than the male. This is noticed through each decade of life, and is particularly true with girl babies, because of the short urethra; also clensing infants with the diaper in wiping them forward, producing a cystitis, which in due time produces pyelitis.

Vaginitis, another cause, is frequently seen in girl infants from the lack of proper attention to personal toilet by an ignorant parent, or a careless nurse.

Acute and chronic ilio-colitis in the young is a factor which in my mind deserves a leading place in the cause of this disease. This is for two well known reasons: First: the frequency with which we see cystitis either complicating or a sequelae to this condition. Second: the lymphatics of the splenic flexure of the descending colon and part of the sigmoid pass over the capsule of the left kidney. The lymphatics of the coecum and ascending colon pass over the capsule of the right kidney, and the lymphatics of the right kidney have been injected through the lymphatics of the appendix. There also exists a direct communication by continuity be tween the lymphatics of the capsule of the kidney and the deeper ones of the kidney substance. By the same token is chronic intestinal stasis to be consireder.

Probably the most important avenue of infections and the ones most often overlooked are the focal infections in the accessory sinuses of the nose and mouth, together with the tonsils, teeth and gums. Indeed in looking for the cause for pyelitis the last named parts must be examined as carefully as the urine.

The blood stream is the route of metastatic infections.

An ascending infection from the bladder is responsible for a large number of cases of pyelitis, and is due to the infection traveling upward to the kidney pelvis by the mucous membrane of the ureter, and by the lymphatics of the ureter, because of the latter's direct path from the bladder to the kidney.

It has been demonstrated that there exists in the ureter an antiperistalic wave which is capable of carrying urine from the bladder to the kidney, and because of this, urine in the partially filled bladder may be propagated to the kidney.

Perineal tears, resulting in a cystocyle with the prolapse of the anterior vaginal wall and bladder, will prevent the bladder from being completely emptied in the female, just as the enlarged prostate in the male, thereby causing a retention of urine and cystitis. Prostatitis and vesicultiis, pyo-salpinx and tubo-ovarian abscesses are also causes.

Pyelitis is a very common complication of pregnancy, and should command more attention than it does. Each case of unexplained fever during pregnancy, with or without chills, calls for a careful chemical and bacteriological examination of the urine. The existance of this condition during pregnancy is interesting because of the possible cause. One is that pregnancy has caused a lighting up of an old infection from which the patient suffered in infancy or childhood. Another is because of the three physiological constrictions in the ureter and the passive congestion of the blad-

der, a dilatation of the upper urinary tract may cause a stasis which results in infection.

I have had two patients within the past year with more than two per cent of albumen in the urine during pregnancy who had been told they had Nephritis. An examination of this urine showed it not only contained a large amount of albumen, but contained pus and colon bacilli, all of which disappeared under the treatment for pyelitis.

Pyelitis is often found in patients who have suffered from an acute infectious diseases as measles, gripp, typhoid fever or tonsillitis. The symptoms of pyelitis vary from those of systitis to severe chills, fever and prostration. Again, a patient may complain of being easily fatigued, lose some weight and run a low grade temperature, which is suggestive of tubercular infection. It has been my experience that pain in the region of the kidney is rare. One symptom I have been impressed with is pain in the bladder and over the course of the ureters just as the bladder is emptied. This is most probably due to stricture of the ureter. I have three patients who complained bitterly of this. The strictures have since been dilated by Doctor Hunner of Baltimore. Two have been relieved entirely and one is yet being treated.

The treatment of pyelitis may be divided into internal medication, pelvic lavage and the use of autogenous vaccines. In internal treatment I have gotten the best results by rendering the urine alkaline for one week with Citrate of Potash, then acid by giving Acid Sodium Phosphate and giving to an adult from forty to sixty grains of Urotropin a day. This is kept up for ten days, then alternate with the alkali again. Pelvic lavage is, I think, the ideal treatment when it can be carried out, although not possible with all patients for various reasons. The patient may not be able to go where this is done; advanced pregnancy may not permit it, and in children it may not be successfully carried out without the use of repeated anesthetics. The use of autogenous vaccine is, I think, both safe and sane. Specimens of urine may be sent to the laboratory and a vaccine prepared while the patient is taking medical treatment at home. I have had some very gratifying results from this mode of treatment. It has been my experience that the worst cases, and particularly those with blood in the urine, show the best results. Whether this is due to the specific action of the vaccine, some protean substance, or the fact that it causes a marked increase in the leukocytes, I cannot say.

ANNOUNCEMENTS AND COMMUMICATIONS

August 15, 1918.

From Dr. Franklin Martin, Member of Advisory Commission.

To the Editor.

Subject: Volunteer Medical Service Corps.

1. We enclose herewith statment on the reorganized Volunteer Medical Service Corps, with letter from President Wilson formally approving plan adopted by the Council of National Defense; also, personnel of the Central Governing Board. We trust that you will be able to give space to this statement in the forthcoming issue of your publication.

By direction of Dr. Franklin Martin:

A. J. COLMAN,
Assistant Secretary,
General Medical Board.

VOLUNTEER MEDICAL SERVICE CORPS

Statement by Dr. Franklin Martin, member of Advisory Commission and Chairman of General Medical Board, Council of National Defense.

FOREWORD

The Volunteer Medical Service Corps was authorized by the Council of National Defense on January 31, 1918. Under this authorization the membership of the corps consisted of all physicians who because of overage, physical disability, dependents and essential home needs were not eligible for service in the Medical Reserve Corps of the Army or Navy.

Enlarged Scope of the Organization.

On August 5th the Council of National Defense authorized a change in the scope of the organization and an increase and amplifification of its Central Governing Board. Membership in the Corps as now authorized, makes eligible to the Corps every legally qualified physician, including women physicians, holding the degree of Doctor of Medicine from a legally chartered medical school, without reference to age or physical disability, provided he or she is not already commissioned in the Government Service. This organization has now the approval of the President as indicated in the following letter:

THE WHITE HOUSE — Washington
August 12, 1918.

My Dear Dr. Martin:—

I have received your letter of August 5, laying before me the matured plan for the reorganized Volunteer Medical Service Corps, of which you ask my approval. This work was undertaken by you under the authority of the Council of National Defense; it has had great success in enrolling members of the medical profession throughout the country into a volunteer corps available to supply the needs of the Army, Navy and Public Health Service. In co-operation with the General Medical Board of the Council of National Defense, the strong governing board of the reorganized corps will be able to be of increasing service, and through it the finely trained medical profession of the United States is not only made ready for service in connection with the activities already mentioned, but the important work of the Provost Marshall General's Office and the Red Cross will be aided and the problems of the health of the civilian communities of the United States assured consideration. I am very happy to give my approval to the plans which you have submitted, both because of the usefulness of the Volunteer Medical Service Corps and also because it gives me an opportunity to express to you, and through you to the medical profession, my deep appreciation of the spledid service which the whole profession has rendered to the nation with great enthusiasm from the beginning of the present emergency. The health of the Army and the Navy, the health of the country at large, is due to the co-operation which the public authorities have had from the medical profession; the spirit of sacrifice and service has been everywhere present and the record of the mobilization of the many forces of this great Republic will contain no case of readier response or better service than that which the physicians have rendered.

Cordially and faithfully yours,
(Signed) WOODROW WILSON.

Dr. Franklin Martin,
Advisory Commission,
Council of National Defense.

At a meeting of the Central Governing Board, held on Friday, August 2, it was moved by Dr. Sawyer, seconded

by Dr. Martin, that the Central Governing Board shall consist of the present Central Governing Board (excepting Sherk, Bradford, and Brophy) and others as follows:

Surgeon General William C. Gorgas, U. S. A.

Surgeon General William C. Braistead, U. S. N.

Surgeon General Rupert Blue, U. S. P. H. S.

Provost Marshal General E. H. Crowder.

Dr. Franklin Martin, Chairman of Committee on Medicine and Sanitation, Council of National Defense.

Dr. Edward P. Davis, President, Volunteer Medical Service Corps.

Dr John D. McLean, Vice-President.

Dr. Charles E. Sawyer, Secretary.

Admiral Cary T. Grayson, U. S. N.

Dr. F. F. Simpson.

Dr. Frank Billings.

Dr. H. D. Arnold.

Mr. W. Frank Persons—Red Cross.

Dr. Victor C. Vaughan.

Dr. William H. Welch.

Dr. Robert L. Dickinson, Chief of Staff's Office.

Colonel R. B. Miller, U. S. A., Chief of Personnel Division.

Surgeon R. C. Ramsdell, U. S. N., Chief of Personnel Division

Colonel James S. Easby-Smith, Executive Officer.

Dr. Joseph Schereschewsky, Assistant Surgeon General (Personnel).

Dr. C. H. Mayo or W. J. Mayo.

Dr. William Duffield Robinson.

Dr. George David Stewart.

Dr. Duncan Eve, Sr.

Dr. Emma Wheat Gillmore.

GENERAL PLAN

The Volunteer eMdical Service Corps is exactly what its name indicates. It is a gentleman's agreement on the part of the civilian doctors in the United States who have not yet been honored by commissions in the Army and Navy, and a representative board of governors consisting of officials of the Government associated with lay members of the profession, in which the civilian physician agrees to offer his services to the Government if required and asked to so do by the Governing Board.

It is a method of recording all physicians who are not yet in service and classifying them so that their services when required will be utilized in a manner to inflict as little hardship on the individual as possible. It is a method by which every physician not in uniform will be entitled to wear an insignia which will indicate his willingness to serve his Government.

As more than sixty per cent of the physicians of the country will be utilized in carying for the industries at home and and the health of the home people, this large percentage of necessity will be expected to maintain their home status and continue their ordinary professional work.

August 12, 1918.

From Dr. Franklin Martin, Chairman, General Medical Board, Council of National Defense.

To the Editor:

Subject: Enrollment of Physicians.

1. On August 8th the following statement was authorized by the War Department, signed by Newton D. Baker, Secretary of War:

"The War Department today has suspended further volunteering and the receipt of candidates for officers' training camps from civil life. This suspension will remain in force until the legislation now pending before the Congress with regard to draft ages is disposed of and suitable regulations drawn up to cover

the operation of the selective system under the new law. * * * * "

Fearing that this order might be misinterpreted by doctors who would not distinguish between enlistment as a private soldier and enrollment as an officer in the eMdical Reserve Corps, on August 9th I asked the Secretary of War to issue a statement making clear this point.

2. In response to this request on August 10th the following statement was authorized by the War and Navy Departments:

"*Orders issued by the War and Navy Departments on August* 9th *suspending further volunteering and the receipt of candidates for officers' training camps from civil life do not apply to the enrollment of physicians in the Medical Reserve Corps of the Army and the Reserve Force of the Nevy. It is the desire of both departments that the enrollment of physicians should continue as actively as before so that the needs of both services may be effectively met.*

(Signed)
JOSEPHUS DANIELS,
Secretary of the Nevy
NEWTON D. BAKER,
Secretary of War.

3. It is desirable that the definite attention of the medical profession be called to this interpretation in order that enrollment for the Medical Reserve Corps of the Army and the Reserve Force of the Navy which is going on so rapidly at the present time, shall not be interrupted. Trusting that you will give this prominent space in the next issue of your *Journal* and such editorial comment as you may deem desirable, I am,

Yours very truly,
FRANKLIN MARTIN,
Chairman, General Medical Board.

MEDICAL VOLUNTEER CORPS

Dr. J. E. Rader, Chairman of the State Defense Council Medical Section, issues the following statement, authorized by Dr. Franklin Martin, Chairman of the General medical board, Council of National Defense, in regard to the new plan for the enrollment and classification of the physicians in the new Volunteer Medical Service Corps which is now being launched in every State in the Union.

Owing to the drafting under 45 years of age, many members of the medical profession, not already enlisted, are enxious to be enrolled with the Hedical Section of the War Department, in order that they may have the privilege of volunteering before the new law becomes effective.

The Volunteer Medical eSrvice Corps is arranging for an active National Campaign in which all medical men and women will have an opportunity of volunteering for medical service.

GENERAL PLAN

The Volunteer Medical Service Corps is exactly what its name indicates. It is a gentleman's agreement on the part of the civilian doctors of the United States who have not yet been honored by Commissions in the Army and Navy, and a representative board of governors consisting of officials of the Government associated with lay members of the profession, in which the civilian physician agrees to offer his services to the Government if asked to do so by the Government board. It is a method of recording all physicians who are not yet in service and classifying them so that their service when required will be uti-

lized in a manner to inflict as little hardship as possible on the individual. It is a method by which every physician not in uniform will be entitled to wear an insignia which will indicate his willingness to serve his Government.

As more than 60 per cent of the physicians of the country will be utilized in caring for the industries at home and the health of the home people, this large percentage of necessity will be expected to maintain their home status and continue their ordinary professional work.

OBJECT OF THE CORPS

1. Placing on record all medical men of the United States.
2. Aiding Army, Navy and Public Health Service in supplying War needs.
3. Providing the best civilian service possible.
4. Giving recognition to all who record themselves either in Army, Navy, Public Health Activities or Civilian Service.

THIS ORGANIZATION PROVIDES.

1. Means for obtaining quickly men and women for any service required.
2. Furnishes recommendations and credentials necessary to assure the best of service both military and civil.
3. Determines beyond question the physician's attitude toward the War. Through this organization plan many men will be registered for Army, Navy and Public Health service who can be called when needed without delay, thereby medical reserve will at once be created which will be made accessible for any service no matter how urgent the needs. Up to the present there have been so many to be called that no great difficutly has been experienced. From now on quick needs will be more difficult to fill, except as they have been anticipated by having a direct line on this who are willing to serve. This necessity, the Volunteer Medical Service Corps fulfils, not alone as relates to war needs but also to the increasing civilian needs.

CIVILIAN SERVICE

One great need of definite organization in relating to civilian service. Unless some fifixed plan is adopted home people may suffer and medicine itself may be discredited. This plan registers all medical men for all kinds of service and places them within reach of those who know the needs and will arrange for their supply.

RECOGNITION

In the Volunteer Medical Service Corps every physician will have definite recognition of his standing as related to the war and will receive proper credit for service rendered, whether in Army, Navy, Public eHalth or Civilian Service.

CONSERVATION OF THE PROFESSION.

If all medical services are conserved, we should not suffer. Indiscriminate placement and inconsiderate acceptance of men for war service may bring suffering, while specific organized handling of all medical forces will afford ample medical attention for all.

TENTATIVE CLASSIFICATION PLAN.

Class 1. Fit-to -fight men under 40.
Class 2. Reserves under 55.
Class 3. Home forces over 55.
Class 4. Ineligibles.

Reserves will consist of those who may be called upon for Army, Navy, Public

Health and Civilian eSrvice when necessity requires. The home forces are those who are only able to do civilian service.

DEFINITE CLASSIFICATION.

Class 1. Medical Reserve Corps; such as are needed in the present or near future Army or Navy service.

Class 2. Such as may be called for special Army or Navy and Public Health service and for all civilian service.

Class 3. Ineligibles such as have been charged with unprofessional conduct, moral unfitness or professional inaptitude.

CLASSIFICATION TO BE MADE WITH REFERENCE TO THE FOLLOWING:

a. Essential to communities.

b. Essential to institutions.

c. Essential to Health Departments.

d. Essential to Medical Schools.

e. Essential to Industries.

f. Essential to Local and Medical Advisory Boards.

OPERATING SYSTEM.

All matters pertaining to the organization will be under the following:

1. Central Governing Board located at Washington.

2. Forty-nine State Executive Committees.

3. One Representative in each county of fifty thousand population or under and one additional representative for counties having over fifty thousand population or fraction thereof.

The duties of the Central Governing Board: Are to receive and pass upon all applications.

The Duties of the State Executive Committee: Are to receive facts from county representatives and make recommendations to central governing board, and the *Duties of the County Representatives*: Are to submit facts to State Committees according to advice from central governing board or State Executive Committees.

MEMBERSHIP.

Membership in the Volunteer Medical Service Corps shal consist of every legally qualified physician, including women physicians, holding the degree of doctor of medicine from a legally chartered medicine school, without reference to age or physical disability, may apply for membership in the Volunteer Medical Service Corps, provided he or she is not already commissioned in the Government Service. Application for membership in the Corps shall be made upon blanks furnished for that purpose for proper classification according to training and special fitness.

INSIGNIA.

Each person elected to membership in the Corps will be designated by an insignia which has been authorized by the Council of National Defense, and wheih members of the Corps will be authorized and required to wear. The insignia shall not be loaned to any person not a member of the Corps, nor shall it be worn after notification that eligibility to the Volunteer Medical Service Corps has ceased to exist; and it shall be returned on demand of the central governing board.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., EDITOR
C. R. ENSLOW, M. D.
J. E. RADER, M. D. ASSISTANT EDITORS

Huntington, W. Va., Sept., 1918

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.
Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

ADVERTISEMENTS

Advertising forms will go to press not later than the 10th of each month.
All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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"CRITICISM"

I wonder if our members ever sit down and take a personal inventory? Did you fellows ever stop to think how very easy it is to run the affairs of your professional brethern? Just stop a minute and ponder the question, "How often have I been misunderstood"? Every single one of us must meet our problems as individuals. Each one of us sits downs and looks into his own heart for guidance. Whom among us is the best judge of an honest man. Shall I say to you "do this, do so"? Not so you could notice it! I believe I have read in THE BOOK somewhere". Let him who is without sin cast the first stone" Suppose we sit down and think it over.

The following are abstracts from editorials published in *The Journal of the American Medical Association* for Aug 10, 1918.

THE MEDICAL PROFESSION AND THE WAR

More than 25,000 physicians have accepted commissions in the Medical Department of the Army, and at least 2,000 more are in process of being com-

missioned. Adding to this number those in the Navy, we can estimate that over 29,000 physicians have volunteered and are now in active service or subject to immediate orders. The 5,000 asked for last May have been supplied, another 5,000 will be called for immediately, and probably still another 5,000 later on. It is now generally believed that the present plan is to raise an army of 5,000,000 men as soon as possible. This means at least 35,000, if not 40,000 medical officers. The way in which our profession has already responded to the call of the Surgeon-General demonstrates both the patriotism and the proverbial unselfishness of the average medical man. No doubt the same spirit would supply the 40,000. But this voluntary method of furnishing the Army with medical officers is as unfair and as unsatisfactory as would be the same method of supplying the necessary personnel for the fighting force.

The physician who is prompted by a purely altruistic spirit, the one who is always willing to make sacrifices for his country, the one who is willing to give up a position attained through years of endeavor for the good of the common cause—these are the men who have been coming forward from the first, and who will continue to come forward. The man who wants to utilize the opportunity to make money, the man who would capitalize the sacrifices of a confrere, the indolent—these find it possible to explain — to themselves — why they do not volunteer. There are, of course, those whom the Surgeon-General's Office will not commission because it knows of justifiable exempting circumstances. There are those whose entrance into the service would be a distinct loss to their communities and, in the final analysis, to the government.

The democratic method — the correct method—to raise an army is compulsory selective service. *The Journal,* however, has always opposed—and would continue to oppose—a compulsory draft of physicians alone. Such a procedure would be against the spirit of the Constitution of the United States: it has been, is, and would be in the future, uncalled for and an insult to the profession. But a compulsory selective service of all men, which would include physicians, is ideal. It is for this reason that *The Journal* rejoices in the fact that Congress is finally seriously considering raising the draft age to 45 years. There will be opposition, of course, and it is possible that the maximum age will be reduced below 45. It is to be hoped not.

If the new draft bill becomes a law, it will help to solve the problems that now face those who are interested in the health conditions of the country. There never has been any doubt that the number of physicians necessary for the Army would be forthcoming. There is the other side, however, and that is that the voluntary system is likely to replete certain communities. It has already seriously affected certain hospitals and medical colleges. Sanitarians, health officers and other offificials who were doing important work in civilian life have entered military service, thus leaving vacant very important public health positions. The Provost Marshal-General's Office is bewailing the fact that a large number of medical men connected with the local, district and advisory boards are giving up this work to enter military service. With the compulsory selective service age increased to 45, there remains only the

question of devising methods of procedure to utilize the medical man power thus made available to the best interests of the military forces and of the civilian population. Because of this, *The Journal* welcomes the conscription of the active man power of the entire nation, a method which is not only democratic, but has proved itself eminently fair and equitable to all concerned.—*Jour. A. M. A.*, Aug. 10, 1918.

State News

Dr. L. A. Williams of Huntington spent sometime recently in Morgantown visiting his son who is in the training school at the University.

Dr. B. Wheeler surgeon-in-charge of the C. & O. hospital at Clifton Forge, Va. was a recent professional visitor in Huntington.

The Hotel Francis at Princeton has been purchased by Drs. C. C. Peters and G. L. Todd who have arranged to convert it into a hospital.

Dr H. P. Gerlach of Huntington has successfully passed the state board of Florida, Dr. Gerlach spends the winter months in that state.

Mrs. E. B. Gerlach of Huntington has joined her husband at Camp Jackson, Columbia, S. C., where he is stationed at a base hospital. Dr. Gerlach is a first lieutenant in the M. R. C.

Dr. Wade St. Clair of Bluefield spent the day in Huntington recently, enroute to Charleston to attend a meeting of the State Council of Defense.

Dr. E. H. Thompson of Bluefield passed through Huntington enroute to Charleston to attend a meeting of the State Health Board.

Dr. S. L. Jepson, State Health Commissioner of Charleston has been taking his first vacation in two years.

Capt. Harry G. Steele of Bluefield is now stationed at Camp Sheridan, Montgomery, Alabama.

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OFFICERS' UNIFORMS AT COST—AFTER A WHILE

A general order has been issued by the War Department adopting standard materials for officers' uniforms and providing that the cloth for these uniforms shall be supplied by the quartermaster corps at cost. Furthermore, the quartermaster corps will make contracts with tailors to make uniforms for officers These contracts will require a guarantee that the garments shall fit. Any changes or alteration required to make them fit will be made at the expense of the contractor. The cost of the uniform to the officer will be the contract price plus the cost of the cloth. The officer will pay the local quartermaster, who will in turn pay the contractor. Should the officer prefer, he may have the uniform made by a private tailor, at his own expense, of course, but in any case he must use cloth furnished by the quartermaster corps, which will be charged to him at cost. While the order has been issued, the supply of cloth is not sufficient as yet to put it into effect nor have contracts been made with the tailors. It is stated that several months may elapse before it is practicable to put the order into effect. In the meantime, officers will have to purchase their uniforms from private tailors as heretofore.

—o—

Dr. Gny Yost of Huntington received orders Sunday to report to Camp Meade, Md., on September 1. Dr. Yost was accepted several weeks ago in the medical reserve. He will turn over his practice

to his wife, Dr. Nellie Yost, who up to this time has been devoting her time to the treatment of women's and children's diseases.

—o—

Dr. J. Ross Hunter of Huntington, has returned home after having been called to his old home in North Carolina on account of the illness of his father, who was much improved at the time Dr. Hunter left.

First Lieut. E. A. Corbin of Ellenboro, W. Va., is now stationed at Denver, Colo.

Dr. S. R. Holroyd, President of West Virginia State Medical Association of Athens, attended the recent meeting in Charleston of the State Defense Council.

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Program of the Regional Home Service Red Cross Conference, Morgantown, W. Va., July 19-21.

Under the direction of the Department of Civilian Relief, Potomac Division American Red Cross Society, with the co-operation of the War Time Commission of Churches, the Summer School of the State University, the West Virginia Inter-Church Council for Social Service, the Anti-Tuberculosis League of West Virginia, the State Departments of Health and Education, the State Sunday School Association and the Executive Committee of the State Conference of Charities and Correction.

Friday Morning, July 19th

C. E. Palmer, presiding, Chairman Local Chapter, Red Cross Society.

9:00—Allotments and Allowances; Civil Relief Act—T. J. Edmonds, Division Director Civilian Relief Discussion.

10:30—The Scope and Spirit of Home Service—P. M. Conley, Educational Director, Potomac Division.

11:30—The Church and Home Service—Dr. H. C. Howard, Wheeling, President West Virginia Inter-Church Council for Social Service.

Discussion led by Director C. R. Titlow, Department, State S. S. Association.

Friday Afternoon.

M. L. Brown, presiding, President Associated Charities, Morgantown.

2:00—Organization and Publicity—Mr. Edmonds.

Discussion.

3:00—A War Time Health Program for West Virginia—Dr. S. L. Jepson, State Commissioner of Health.

The Feebleminded with Special Reference to Juvenile Delinquency—Dr. L. V. Guthrie, State Hospital, Huntington.

State Institutions and War Time Needs—Dr. E. B. Stephenson, President State Board of Control.

Discussion led by Supt. H. E. Flesher, State Industrial School.

Friday Evening.

Dr. I. C. White, presiding, Chairman Executive Committee, Local Chapter.

8:00—Tuberculosis; Follow-up Work with Rejected, and Care of Discharged—Dr. Harriet B. Jones, Executive Secretary State Anti-Tuberculosis League. Re-education of Crippled Soldiers—Mr. Edmonds.

Saturday Morning, July 20th.

Dr. L. M. Bristol, presiding, President State Conference of Charities and Correction.

9:00—Case conference conducted by Mr. Edmonds. Reports. Office Office system and case records; cases involving problems as loans

and grants, social service, tuberculosis, juvenile delinquency health, school; special case problems; relating with camps.

Saturday Afternoon

Dr. Waitman Barbe, presiding, Director Summer School, State University.

Discussion led by Headquarters, Washington.

Discussion led by Prof. L. B. Hill, West Virginia University.

3:00—Problems of Child Welfare:
Health — Mrs. Eleanor Knutti, Morgantown.
Child Labor—Prof. E. H. Vickers, West Virginia University.
The Dependent Child — L. H. Putnam, Supervisor of Agents, State Humane Society.
Discussion.

Sunday Evening, July 21st

University Campus, Weather Permitting, otherwise, Commencement Hall, 7:30 p. m.

Music.

A Message from the Federal Council of Churches—Dr. L. M. Bristol.

Prayer—Dr. F. F. Briggs, President Ministerial Association.

Address to Draftees and Training Detachment—Dr. Thos. E. Hodges.

Music.

Address—Sapper Coleman.

Dr. H. G. Tompkins and Dr. T K. Oates of Martinsburg were recently in Huntington enroute to Charleston. Dr. Oates is a member of the State Council from the second-district.

Dr. W. C. McGuire of Huntington accompanied by his family has gone to Baltimore, Md. for a ten days vacation, making the trip by motor.

Movements of W. Va. physicians in the M. R. C. service for August.

To Camp Devens, Ayer, Mass., for duty, from Camp Pike, Lieut. Solomon L. Cherry, Clarksburg.

To Camp Dix, Wrightstown, N. J., for duty, from Fort Oglethorpe, Lieut. Carter S. Fleming, Fairmont.

To Camp Lee, Petersburg, Va., for duty, Lieut. Carson A. Willis, Clarks-

To Camp Upton, L. I., N. Y., with the board examining the command for nervous and mental diseases, Capt. Charles W. Halterman, Clarksburg.

To Fort Oglethorpe for instruction, Capt. Tib N. Goff Kenova; Lients. Erland H. Herdick, Beckley; Walter W. Heald, Huntington; Grover C. Robertson, Spencer; from duty as a drafted man, Lieut. John E. Corkrean, Sand Fork.

To Metuchcon, N. J., for duty from Fort Oglethorpe, Lieuts. Etley P. Smith, Barrackville, Claude M. Vaughan, Farmington; John H. Hoskins, Lillybrook.

To New York City, Neruological Insbtitute, from Camp Cody, Major Lewis C. Covington, Charleston.

To Camp Gordon, Atlanta, Ga., base hospital, from Fort McPherson, Lieut. C. M. Truschel, Wheeling.

To Camp Lee, Petersburg, Va., base hospital, Capt. B. L. Traynham, Sweet Springs.

To Camp Logan, Houston, Tex., base hospital, from Fort Riley, Capt. O. D. Barker, Parkersburg.

To Camp Meigs, Washington, D. C., for duty, Capt. C. N. Brown, Elizabeth.

To Camp Pike, Little Rock, Ark., for duty from Camp Shelby, Capt. L. P. Jones, Pennsboro; from Fort Oglethorpe, Capt. E. McElfresh, Point Pleasant.

To Camp Sheridan, Montgomery, Ala.,

base hospital, from Camp Shelby, Lieut. G. C. Patton, Harrisville.

To Camp Wadsworth, Spartanburg, S. C., for duty, from Fort Oglethorpe, Lieut. I. M. Deer, Henford.

To Fort Oglethorpe, for intsruction, Capt. P. W. McClung, Elizabeth; Lieuts. T. L. Harris, Parkersburg; H. A. Whisler Wallace; A. L. Coyle, C. J. Ryan, Wheeling; from Camp McClellan, Capt. W. W. Orr, Worthington.

To Fort Screven, Ga., for temporary duty, Lieut. H. B. Copeland, Wheeling.

To report to the comanding general, base hospital, Southern Department, from Camp Travis, Lieut. T. E. Vass, Bluefield.

West Virginia

To Camp Bowie, Fort Worth, Texas, base hospital, from Rockefeller Institute, Lieut. Frank C. Hodges, Huntington.

To Camp Lee, Petersburg, Va., base hospital, Lieut. Harry E. Whaley, Hansford.

To Fort Oglethorpe for instruction, Capts. Martin V. B. Godbey, Charleston; James W. McDonald, Fairmont; Eugene B. Wright, Richmond; Lieut. Oliver H. Griffith, Parkersburg.

To Syracuse, N. Y., for duty, from Camp Gordon, Lieut. Charles P. S. Ford, Hansford.

The following order has been revoked: *To Camp Beauregard,* Alexandria, La., for duty, from Fort Oglethorpe, Lieut. John E. Miller, Widen.

Society Proceedings

Dartmour, W. Va., July 31, 1918.

Editor W. Va. Medical Journal:

The Barbous-Randolph-Tucker County Medical Society held its July meeting at Thomas-Davis on the 27th. This meeting was especially interesting because of some new features.

First, the members witnessed and acted as judges in the First Aid contest, of the miners of the Davis Coal and Coke Company. This contest was held at Thomas at 4:30 p. m. with a large and enthusiastic audience, and the teams from the different mines, ten in number, showed that they had been well trained and had learned much that may be useful in saving suffering and preventing death, in the many accidents that endanger miners lives.

The team from Kempton received the first prize for efficiency in work.

After the awarding of the different prizes, Dr. and Mrs. Miller generously entertained the physicians and some of their wives, in their home, after which the physicians who could attend, were taken to Davis in autos, where the program was full of much interest.

The session was held at the residence of Dr. Butt, and began at about 9 p. m. and was continued until after 12. The following physicians were present; Drs. Butt, Lanich, Bosworth, A. S. Moore, E. F. Groomus, Ives and Miller, members, and we had as visitors Drs. A. A. Scherr, A. M. Padilla, S. I. Bross and C. S. Hoffman, Drs. Rodgers, Calvert and Faber were at Thomas but could not be at Davis. Dr. Butt presided. The first on the program was a case of pellagra, present by Dr. E. F. Moore, resident physician in the Allegheiny Heights Hospital. The patient was a married woman 37 years old. Mother of six children; living at Whitmer in Randolph County. The symptoms develoed last March and have gradually increased in severity, till now, when the patient is greatly emaciated, and recently nervous and maniachal. She had been in the hospital only about two weeks. This is unique, from

the fact that this is the first case to be reported in this section and but few of the physicians present, had even seen a case.

Dr. Moore prepared a paper on Pellagra, which I herewith send, for use of *The Journal,* and for further history of the case., I refer to Dr. Moore's paper.

Dr. Chas A. Grooms read an excellent paper on "Summer Diarrhoeas of Children" which paper I also send for the *Journal.* This paper brought out quite a discussion, especially as to the value of opiates and irrigation of the bowel, some claimed they had never gotten any good results from high irrigation, especially Drs. Hoffman and Miller, while others Dr. Grooms and Dr. Bosworth seemed to greatly rely on this aid. Dr. Hoffman has great faith in opiates, but has greater faith in proper food. His in this trouble. This is a very common experience that children cannot assimilate the richer makes, and he has had best results from securing the milk of the cow which does not produce much cream. Dr. Butt has faith in the use epsom salts affliction at this season, and all had something to say.

Dr. J. L. Miller gave his experience in the use of the Whooping Cough Vaccine in 16 cases, in which all the cases, but one, were greatly benefitted. The first injection generally, greatly mitigating the paroxysms, and there being marked improvement in each succeeding dose, with a shortening of the duration of the disease. All his cases were treated in 3rd week of the disease. I asked Dr. Miller to give the *Journal* his report, which I hope to see in same.

DDr. A. M. Padilla, of Henry, a Partarisan by nativity and a returned surgeon from the English Army, gave us a very interesting account of his "Experience Overthere". His experience is quite thrilling and shows the treachery and brutality of the Hun, from a rich field of persumed contact and observation, which was very interesting to all, We hope the doctor will favor us with a paper on his personal experience "Overthere."

Dr. C. S. Hoffman gave us a very interesting talk on his experience in hospital work, especially in injuries to the head, and what may be done in way of surgery. He is impressed with the history of bone graft as an improvement to the so-called "silver plate," which he doubts as having been used so frequently as claimed, if at all, in protecting the brain where large portion of skull has been removed.

He has found that many of the cases diagnosed and treated as rheumatism, are osteo-myelitis, and are only relieved by opening up the diseased periostate membrane and giving free drainage.

He would impress on physicians the danger of force in attempting to reduce a hurnia, or an old hernial sack. If fail to reduce easily, always refer for an early operation. Dr. Hoffman denounces the use of strychnine for heart stimulant. He says he has had more bad than good results in use of this drug, for weak heart, especially after operations.

For post operative cases, use morphine for relieving pain, and piturotion to relieve gaseous distintives of bowels.

Under suspension of rules Dr. A. M. Padilla was elected a member of the society.

The secretary was authorized to pay all necessary bills, etc., and arrange for the October meeting in Elkins.

The society was then invited into the dining room where Mrs. Butt had prepared an excellent lunch. It was 2 a. m. when the members finally departed for

homes, or places of short slumber, on the whole, the meeting was interesting, instructive, and quite siciable. We shall always have pleasant memories of our Thomas-Davis meetings.

J. C. IRONS, Secretary.

Medicine

Treatment of Initial Impetigo Contagiosa

H. G. Adamson, M. D., F. R. C. P., London, in *British Med. Jour.*—The secret of success consists in removing all trace of the crust and overhanging blister margins. Frequent mopping with hot water accomplishes this, which, with the exception of what must be picked off with the forceps, the patient can do himself. The eroded surfaces are mopped with the lotio hyrarg. percholor. 1:6,000, or with lotio cupri sulphatis 1:8,000. The ung. hydrarg. ammon. chlor. is applied at night. Boric and sulphur ointments are also used. Obstinate patches of ecthyma are treated by thorough application of this: Argent. nit. gr. 15; sp. aetheris nit. 1 fluidounce.

The Use and Abuse of Pituitrin.

Dr. eGorge W. Kosmak, of New York City, referred to the widespread and unlimited employment of this drug in obstetrics, claiming that the now extensive clinical data published warranted the formulation of definite indications for its use. No satisfactory standards had as yet been devised, the physiological basis being unwarranted because of the specific variations in the potency of the extract. Moreover, other organic substances would stimulate the isolated uterine muscle directly. Indications for use of pituitrin were limited to the simple uterine intertia multiparae without fetal or maternal dystocia and a patient not exhausted. The author's personal experience and observations of cases referred to the Lying-In Hospital, had led him to add his confirmation to the warnings already published.

The use of pituitrin in Caesarean section was not as certain as that of ergot, and could not be regarded as a substitute, being merely an aid to forceps in certain cases where stimulation of the uterine contractions might drive the head to a more suitable level for instrumental delivery. Pituitrin was of especial value in curettage for incomplete abortion. also in metorrhagia of young girls and in older women with small fibroids or inflammatory lesions in the adnexal regions resulting inhyperemia.

N. Y. Med. Jour., June 1918.

Corpus Luteum Extract in Repeated Abortion.—John Cooke Hirst (*American Journal of Obstetrics,* April, 1918) refers to a type of case—the "irritable uterus"—in which the uterus will stand distention up to a certain point, usually three or four months of pregnancy, then expels its contents. There is no apparent cause, such as uterine displacement, lacerations or erosions of the cervix, or pelvic adhesions, and the Wassermann is negative. In the case of a patient just beginning her seventh pregnancy, previously attended several times in abortion about the third month, the thought presented itself to the author that the cause of the miscarriages might have been a premature absorption or blighting of the corpus luteum of pregnancy, the relation of which to pregnancy is well known. Upon this basis, intramuscular injection of corpus luteum extract was instituted, on mil of the extract, representing twenty milligrams of the dried substance, being administered once daily. Thirty-six injections were given in the

course of two months. The patient had never before gone beyong the fourth month and one week of pregnancy, but this pregnancy resulted in a living child delivered at term. A second patient had had five miscarriages, never going beyond three and one half months. In the sixth pregnancy corpus luteum was begun when she was seven weeks pregnant. She was also delivered at term. A third patient had a similar history and was successfully treated. Further experience by various observers will be required to establish definitely the value of the procedure. Intramuscular rather than oral use of the extract is recommended.

Continued Tachycardia.

Continued tachyardia is an effection of adult life and appears to be unknown in childhood. The affection may be overlooked upon as the result of a bulbar or bulbospinal neurosis and some cases are undoubtedly of thyroid origin. However, the pathogenesis of the affection is most obscure.

The symptoms of continued tachycardia must be distinguished from those of the paroxystical type. The symptoms belonging to continued tachycardia are two, namely, acceleration of the beats and a lowered blood pressure. The acceleration of the beats is certainly considerable, but never reaches the number occurring in the paroxystical form, the pulse averaging from 140 to 150 pulsations, with a maximum of 185.

While the intensity of the cardiac contractions produces vibrations of the thoracic walls in paroxystical tachycardia. in the continued form the apical shock remains perfectly perceptible and there is neither thoracic vibration nor thrill. the contractions maintaining their accustomed force. Moreover there is usually no cardiac murmur, the heart sounds remaining normal and with no change in their duration.

The other element in all cases of continued tachycardia is the lowered arterial tension, a distinctive symptom. The pulsations can hardly be felt, the pulse offering rather an indistinct undulation so that the cardiac contractions cannot be counted. Another distinctive feature is the absence of paroxysms, the affection being continued without variations once the maximum number of cardiac contractions has been attained.

The heart is often dilated and very marked venous pulsation is observed in the cervical region that may be mistaken for arterial upon a merely superfificial examination. This dilation of the right heart rarely causes death and even after the tachycardia ha slasted for some time no albumin can be detected in the urine. There is little stasis in the various viscera, little or no peripheral edma, and an absence of an hepatic pulse.

There may be fever present for some time. Other general disturbances are unequal pupils or myosis; occasional nausea or vomiting, and vasmotor disturbances, such as profuse sweating or high coloring of the skin, particularly of the face. The disease may culminate in asystolia, but this seems to be less common than a spontaneous recovery.

Rest is the first element in treatment. The most important cardiac indication is to sustain the heart against fatigue and to prevent the advent of asystolia. Digitalis is the most important in this respect, but caffeine, sparteine, and ether have their indications. Quinine at the dose of one to one and a half grams daily has given good results and some writers have advocated ergotine.

—*N. Y. Med. Jour.*

Surgery

Stasis is a normal result of an abdominal operation and it has been found experimentally that, in animals, the simple opening of the abdomen without trauma, causes cessation of peristalsis for hours. If you add to this a varying amount of trauma, which is present in all abdominal operations, it may be a considerable number of hours before peristalsis is resumed. Nor are these the only factors. Solid matter in the intestines is one of the normal stimulants to peristaltic movements, yet we do our best to have the patient's intestinal tract free from this normal stimulant, sometimes even by the use of violent cathartics. Certain drugs give rise to a period of intestinal stasis, after a rather vigorous cathartic action; notable in this group is castor oil. It would seem more rational to use a saline cathartic preceded by Russian oil in the few cases requiring drugs and to make the catharsis as mild as possible. The colon, which should always be emptied before an operation, can be effectively evacuated by enemeta, which does away with any interference with normal peristaltic movements of the small intestines.

Another very serious drawback to the use of cathartics the night before an operation is that the patient's sleep may be seriously interfered with, and even where there has been no interference with sleep, a patient who has been vigorously purged feels weak and played out. Who would think of giving an athlete castor oil the night before a race? Yet the patient needs his strength for the operation quite as much as the athlete for the race. There is a scientific foundation for this. Catharties lower the blood pressure, and if you believe that the lowering of blood pressure is a measure of shock, you have produced shock by catharsis before the operation is begun.

It is not impossible that we may get some aid in dealing with the intestinal problem from changing the bacterial flora either by replanting or by feeding, or more probably by a combination of both.

The effect of ether anesthesia on the kidneys has always caused some apprehension. In this matter much blame has been laid to ether that should have been laid to other causes.

In the past operation have been undertaken on patients without symptoms of kidney disease who have not had a urinalysis and after the operation the discovery of albumin and casts in the urine has given rise to the inference that ether caused the albumin. In not a few of these cases a urinalysis before the operation would have demonstrated the presence af albumin. It is true, however, that some patients who do not have albumin before operation do have it afterwards, and it is also certain that ether contributes to the kidney irritation. It is also true that ether is only one of the factors that may contribute to this kidney irritation. Here again faulty dietetic preparation and after care may be quite as important as ether in causing this kidney irration, and one must not forget that the toxins from sepsis are in themselves enough in some cases to cause serious kidney disturbance.

The dietetic preparation of nephritic cases, like the preparation of patients with- high blood pressure or diabetes, should be in the hands of a medical man particularly skilled in this line of work if the best results are to be obtained.

I do not intend to encroach on his field.

Regeneration of Bone.—Albert A. Berg and William Thalhimer (*Annals of Surgery*, March, 1918) conclude as to regeneration of bone that : Periosteum, devoid of adherent bone cells when transplanted into foreign tissues, produces bone. Endosteum and osteoblasts lining Haversian canals in bone transplants produce bone very actively. The cambium layer when adherent to transplanted cortex produces bone. Some bone cells in the transplant are able to persist for almost a year, but most of the bone is absorbed. Fully developed adult bone cells, although they may remain alive for a considerable time, do not reproduce themselves and form bone. Very young lacunar cells can reproduce themselves and form bone. Transplanted bone is absorbed not only by osteoblasts, but also by direct action, biochemical, of growing young bone, and the transplanted bone is replaced either by a creeping forward of the new bone or a gradual extension or expansion of the new bone into the tarnsplant. Marrow spaces and hematopietic marrow are formed in the bone which develops from transplanted periosteum. The cource of these hematopoietic cells was not determined. Bone when it grows into cartilage does so in the same manner characteristic of the normal embryonic development of enchondral bone including also epiphyseal formation.

Blood Transfussion.—P. Ameuille (*Bulletin de l' Academie de medecine*, February 12, 1918) notes that the ideal method in blood transfussion is to collect the blood of the donor through a needle and inject it similarly in the recipient, thus avoiding any incisions or serious vascalur injury. With Queyrat's needle, 300 to 500 mils of blood can be withdraw from the veins at the bend of the elbow in a normal subject. The puncture with Queyrat's needle causes but little pain and cannot give trouble in any way. The blood as it runs out is collected in a sterile receptacle containing about 0.1 gram of sodium citrate for each 100 mils of blood to be withdrawn. Enough water will be present in the receptacle if the citrac is merely dropped in it in the dry state and the receptacle than sterilized in the autoclave. The receptacle should be continuously shaken while the blood is dropping into it. The blood is then reinjected in the recipient from a wash bottle connected with a rubber bulb as though an intravenous saline injection were being given. By this method the blood can be kept—at 37° C. —as long as four days without harm to the recipient. At the front the author has found it feasible to provide for emergencies by keeping several bottles of citrated blood in the incubator. With so easy and harmless a method denors are easily found, and a single donor can without inconvenience supply additional blood two or three weeks after the first withdrawal. As the blood can be kept for a time, it can be carefully watched to make sure that it does not undergo spontaneous hemolysis. Time is also given for carrying out for a Wassermann test with it in the case of a suspected donor. The entire procedure of transfusion is so facilitated that it becomes available not only for posthemorrhagic anemias but also for certain medical anemias and even for infections or dyscrasic states.

Book Reviews

The Medical Clinics of North America—

March 1918. Published by W. B. Saunders Company, Vol. 1 Chicago Number. Number 5. This number of the Clinics comes to us with fifteen contributers without a dull clinic in the whole number.

Those of Drs. Mix, Hess and Abt we think will be found of special interest and enlightment to the general practitioner who may have come in contact with the conditions considered and the subjects exemplified.

Published bi-monthly. Price per year $10.00.

The Spleen and Anaemia. Experimental and Clinical Studies

By Richard Mills Pierce, M. D., Sc. D., Professor of Research Medicine, with the assistance of Edward Bell Krumbhaar, M. D. Ph. D., Assistant Professor of Research Medicine and Charles Harrison Frazier, M. D., Sc. D., Professor of Clinical Surgery, University of Pennsylvania. 16 Illustrations, color and black and white. The J. B. Lippincott Company, Philadelphia and London. Price $5.00. This is a book of great merit, showing great care and painstaking research. Until of comparatively recent date the conditions considered and the occult results attributed there-to have been of a rather unsatisfactory character, which by the way is an impressive illustration of the so often proved fact by medical research that what may be considered knowledge today in proved to be mosinformation tomorrow. The text is rather sparsely but beautifully illustrated and an extended bibliography is appended which is a great aid to one who may be interested in the study of the subject more extensively.

The Treatment Cavernous and Plexiform Angiomataby the Injection of Boiling Water. (Wyeth method). By Francis Reder, M. D., F. A. C. S., visiting Surgeon to City Hospital; Consulting surgeon to St. John's Hospital and Missouri Baptist Sanitarium, St. Louis. Illustrated. C. V. Mosby Company, St. Louis, 1918. Price $1.50.

This little brochure gives an illustrates clearly the method and technique of a practical and very successful treatment of this frequently distressing and disfiguring condition. No scar is left such as follows the removal of these tumors with the scalpel.

Emergencies of a General Practice.

By Nathan Clark Morse, A. B., F. A. C. S. Surgeon to Emergency Hospital, Eldora, Iowa; District Surgeon Chicago Northwestern, Minneapolis & St. Louis Railway; Ex-president of the Iowa State Association of Railway Surgeons; Ex-Vice-President Pan-American Congress; Fellow of the American Medical Association; Member of the Society of Clinical Surgeons of North America; Author of Post- operative Treatment. 251 Illustrations. St. oLuis, C. V. Mosby Company, 1918. Price $4.50. This book is exactly what its title indicates. It is filed with practical points for quick reference which will be found t be very comforting to the general practitioner who may not come in contact with these emergenc conditions frequently enough to have it all at his finger's ends. Some of the treatments suggested may be a little old fashioned but have been time tried and tested, with satisfactory results.

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THE TREATMENT OF CONSTIPATION IN INFANCY

Read at Fiftieth Annual Meeting of West Virginia Medical Association, Fairmont, October, 1917.

By Claude L. Holland, M. D.,
Fairmont, W. Va.

My excuse for consuming a portion of your time while drawing your attention for a few moments to this subject is, as I am persuaded, the relatively little attention given by the average practitioner of medicine to a matter that is, or may be, of great importance to the health and general welfare of infants and young children. Furthermore, when we consider that habits, in this regard, formed in early life are apt to persist, into or throughout adult life; when we remember the dire consequences,—the toxaemias, the anaemias, the neurasthenias, and all the array of ills that humanity is heir to,—the premature senility, the physical incapacity, not to mention the untimely deaths, brought about primarily by intestinal stasis, the subject is far reaching in its extent and assumes enormous proportions,

The Treatment of Constipation In Infancy.

The condition designated by the term constipation is not a disease. It is simply a state in which the consistency of the bowel movements is greater, or the passage of the stools less frequent than normal.

The etiology of this condition is so varied and the causative factors have such important bearing on the treatment, that the thing of prime importance in each case is to discover its etiology.

This will involve not only a careful physical examination, but the diet and hygiene of the infant must be gone into in detail. In many cases a rectal examination will throw light on the subject, while in others, abnormalities of the intestinal canal interfering with the passage of its contents can only be discovered by the aid of the X-ray after bismuth meals or bismuth enemata. A

lack of general symptoms in conjunction with the condition is highly suggestive that the trouble is in the rectum, and if the introduction of a suppository is immediately followed by the expulsion of a normal stool, the rectum is almost certainly at fault; while on the other hand, the cases presenting the most marked general symptoms the trouble is usually found to be due to failure of the digestive processes in the small intestines.

When the cause has been determined our efforts must, of course, be directed toward its removal.

Heredity, though doubtful in its relationship, yet maintained by some authorities to be an important factor in some cases cannot, of course, be altered. While such mechanical conditions, causing interference, as the long infantile colon and sigmoid flexure, are only overcome by time and the growth of the child.

Some mechanical conditions demand surgical intervention. Certain other causes as *cretiniam* and the abuse of drugs are quickly and easily relieved.

Pain caused by the passage of large hard stools, by hemerrhoid or by an anal fissure may be the determining factor. If the stools are large and hard they must be made smaller and softer by regulation of the diet and if necessary the temporary administration of milk laxatives. Hemorrhoids should be removed while fissure of the anus can usually be healed by the application of boric-acid ointment, provided, of course, the parts are kept clean and the stools soft. Should this fail the application of silver nitrate will almost always promote healing. Stretching of the sphincter in an infant is almost never necessary.

Constipation due to diatetic errors will, of course, be relieved when the errors in diet have been corrected. To discover the error is not always a simple matter, and can, in some cases, be determined only by the most careful study of the diet together with a microscopic examination of the stools.

An important factor in certain atonic cases is the training of the child to evacuate the bowels at a regular time, and to use the abdominal muscles in the expulsive effort. It is, of course, of prime importance to relieve the cause of the atony, whether it be rickets, malnutrition or anaemia. If the constipation has resulted from the use of laxative drugs they must, of course, be stopped.

It will be necessary in most cases to adopt measures to relieve the constipation while the underlying cause is being sought out and removed. The means to be adopted for this purpose will depend to some extent on the type of constipation to be dealt with. In those cases due to muscular, weakness, massage of the abdomen for from five to ten minutes once or twice daily is a valuable measure; in other types it is of less assistance.

Of especial value in this type are foods which stimulate intestinal peristalsis. During the first year orange juice or prune juice may be given once daily in doses of from one to four tablespoonfuls. During the second year prune pulp and baked apples may be given. During the latter part of the second year it may be advantageous in some cases to give a few teaspoonfuls of some strained vegetables, such as peas, asparagus tips, or spinach. It is necessary however, to exercise great care in the giving of fruits and vegetables lest an excess of these foods disorder the digestion and thereby increase the constipation or possibly in some cases set up a diarrhea.

Bran in the form of crackers can sometimes be used with advantage at the end of the second year, but whether in the form of crackers, rolls or cookies it is not advisable to give it to younger children. In the younger children coarse foods will more likely do harm than good in this condition.

When the stools are hard and dry water in considerable quantities is a valuable agent. It is best given between feedings. The giving of from one to three teaspoons daily of finely divided agar agar mixed with the cereals, or cooked in broth has the advantage of not only keeping the stools moist and soft but increases their bulk. In some young babies, fed artificially is found that the substitution of some of the dextrm and maltose mixtures for the milk or cane sugar in their food relieves their constipation. As a rule the greater the proportion of maltose the greater the laxative action. It occasionally occurs that the addition of oatmeal water or jelly as a cereal diluent to the milk, instead of the more commonly used barley has the effect of relaxing the bowels.

When measures like those set forth above prove ineffectual it will be found necessary to either administer drugs by the mouth or to stimulate the bowel to action from below. Stimulation from below is plainly indicated if the cause of the constipation is in the rectum. It may be and often is difficult to decide what method to adopt when the trouble is a more general one, or the seat of the trouble higher up. By varying the methods from time to time there will be less danger of establishing a habit of dependence upon a certain stimulus. A safer rule will be not to use the same method continuously.

A baby is more likely to acquire a habit of dependence upon rectal stimulation for bowel movements than upon drugs. Especially is this true of suppositories. Babies are readily educated to think that they cannot evacuate the bowels unless reminded to do so by the introduction of a suppository. It is necessary, therefore, to exercise great care in the use of suppositories, lest a bad habit be formed while attempting to train the baby to have a movement of the bowels at a certain time each day.

The suppository that is simplest, least irritating, and often qiute effective, consists of a roll of paper dipped in olive oil. Suppositories made of gluten are much less irritating than those composed of glycerine. While the soap suppository stands about mid-way between the two.

Of enemenata the simplest and best consists of soap and water, and only a sufficient amount should be given to produce the required results. This is usually from two to four ounces. A soft rubber ear syringe is the best instrument for its administration, especially to young babies. A fountain syringe may be used for babies that are older if desired.

When the stool is hard and dry the introduction and retention of one-half to one ounce of olive oil is very valuable. This to be followed later by soap and water if necessary. It is not advisable to give enemas containing glycerine in the treatment of constipation in infants.

The best laxative for babies, and at the same time the simplest and most readily administered, since it can be given in the milk, is milk of magnesia. The ordinary dose is one teaspoonful daily, but more may be given if necessary. It is best given all at one dose, usually in the last feeding at night. Babies are not as a rule disturbed by it, however it occasionally causes some pain and discomfort and in these cases must, of course, be discontinued. A fact

that is greatly in its favor is that babies seldom become dependent upon it. A thing that may be substituted for the magnesia in case it is not well borne, is phosphate of soda. This is also best given in the milk in doses of from ten to sixty grains.

Phenolphthaline in doses of from one to three grains is often found useful in the latter part of the second year. While cascara in doses of from five to thirty drops of one of the fluid preparations is frequently very valuable. Drugs that are too powerful for use in the treatment of constipation in infants, and are also objectionable because of their secondary constipating effects are calomel and castor oil and to some extent sema. These should not be used continuously in the treatment of this trouble.

The administration of olive oil has been found useful in some instances, but it must be remembered always that olive oil is a fat, and that in those cases in which an excess of fat in the food is the cause of the constipation, the condition will only be exaggerated. That the baby's digestion may be disturbed by the olive oil also, is a fact that should never be overlooked.

INFANTILE DIARRHEA—ETIOLOGY AND TREATMENT

Read Before B. R. T. Medical Society, July, 1918.

By Dr. Chas. A. Groomes,
Davis, W. Va.

In and of itself diarrhea should be regarded as a symptom only, but it is found convenient to group under this term all those disorders of infancy whose chief symptom is an increased motor and secretory activity of the intestinal tract. In the great majority of cases this increased activity is brought on by the presence of irritating material of some sort in the canal, whether it be toxic products of pathogenic micro-organisms developed there or excessive amounts of sugar and fat which Finklestein holds produces a disturbance of metabolism to which he gives the name "food intoxication." But in a few instances it may be considered the result of nervous impulses reflected through the central nervous system.

Infants are especially liable to diarrheal disease. Of 3,000 cases of diarrhea treated by Holt in family and dispensary practice, 84 per cent were under and only 16 per cent over two years of age, but the greatest number of cases occurred between the sixth and eighteenth months.

One of the important factors in the etiology of these disorders is undoubtedly the depressing effect of high temperature upon the nervous and especially upon the vasomotor system of the infant. At any rate it seems to lower the resistance of the body and make it more susceptible to other causes. But still more important is the effect of continued heat on the development of bacteria in food materials which are used for feeding the infant. Milk, the most important ingredient of the infant's food, is particularly liable to be contaminated from many sources. Even in winter the average dairy milk is loaded with micro-organisms, but they do not develop because of the low temperature at which the milk is kept. In the summer months, on the contrary, they multiply rapidly. In the adult the acidity of the gastric juice and the more complete digestion of food in the stomach check the development of these micro-organisms before the food enters the intestine. But this is not true of

the infant. During digestion there is no free hydrochloric acid in the infant's stomach. Digestion and absorption take place imperfectly in the stomach and the food is quickly passed on into the small intestines, where there is practically no hindrance to the development of injurious bacteria. Imperfect digestion permits fermentative changes which furnish favorable conditions for the growth of pathogenic bacteria. It is now generally thought that these toxin-producing bacteria are chiefly responsible for the severe diarrheas.

All conditions which lower the vitality or resistance of the infant undoubtedly favor gastro-intestinal disturbance and make the infant more liable to infection. Among these may be mentioned the intense heat of summer, defective hygiene, previous acute disease, malnutrition in all its forms, especially when associated with rachitis, syphilis, and tuberculosis; all forms of over-excitement, nerve irritation which frequently accompanies dentition, and reflex impulses arising from undue exposure of the lower limbs and abdomen to variations in temperature.

Cases of diarrhea are rarely found among infants fed entirely at the breast. Of 1943 fatal cases of which Holt collected records only 3 per cent were breast-fed exclusively. He believes that the partial immunity enjoyed by infants under six months of age is due to the fact that the great majority of such are breast-fed and thus have a sterile and thoroughly digestible food and are not liable to overfeeding. It is a well known fact that artificially-fed babies are more prone to gastro-intestinal disorders. The food substituted for breast milk is frequently defective in composition, difficult of digestion and given to the infant at too frequent intervals or in too large amounts. It sets up an indigestion and weakens the resistance of the intestinal tract to infection.

The prognosis depends largely upon the establishment of appropriate treatment before the production of serious intestinal lesions.

Treatment:—If the diarrhea has been sufficient to remove the irritating substance from the bowel, purgatives are not necessary. But, as a rule, it is best to secure a thorough evacuation of the bowels at the outset by divided doses of calomel or by castor oil. Dr. L. E. LaFetra advises sulphate of soda in half dram doses every half hour for four doses. He claims that it is well retained even in vomiting cases and does not produce tenesmus. After the bowel has been cleared the next object is to secure absolute rest to the alimentary tract for about 24 hours by giving nothing except small quantities of sterile water. The growth of bacteria is thus checked by withholding food in which they can grow.

During the acute stage all milk food should be forbidden. If the attack be mild, rice or barley water may be given after the first twelve hours. In most cases this may be increased in 36 to 48 hours. After the temperature is down and the stools are nearly normal and not offensive, a weak dilution of fat-free milk may be added, increasing the strength gradually.

The value of buttermilk has been emphasized by many writers. It contains very little fat, a moderate amount of sugar and a considerable amount of digestible proteid in the form of lactate of casein. It is distinctly acid due to the presence of lactic acid and lactic acid bacteria, which have an inhibitory action on the development of other bacteria.

In breast-fed infants a limited nurs-

ing is allowed, approximately one-half the regular amount, giving also rice water or weak albumin water between feedings.

No astringent drug should be used in the early part of the attack, but after the intestine is cleared of the offensive material, drugs which have a sedative action on the intestinal mucosa should be used. Most authorities advise the administration of some preparation of bismuth in 10 grain doses every 2 hours for an infant 6 months to one year of age. But in giving these large doses the bismuth must be chemically pure because, if free nitric acid or arsenic be present, vomiting may result or symptoms of arsenical poisoning appear. To be of service the bismuth must be converted in the intestine into the sulphide, producing black stools. If it passes through unchanged there is no favorable action on the intestinal contents. If the stools do not become black, the addition of one grain of precipitated sulphur to each dose will usually bring about the desired effect. Bismuth should be continued in large doses until the infant is ready for milk, then reduced to one-half the dose and continued till full-milk feeding is resumed or constipation becomes marked.

It may be necessary to combine some opiate with the bismuth. There is a marked difference of opinion as to its use, but most writers agree that it should be avoided at the outset of the disease and that it should not be employed in grave toxemic states with any tendency to drowsiness or stupor or to cyanosis. It should be discontinued if the temperature goes up or the bowel movements are checked too much.

Another drug which has a powerful constipating effect is castor oil in small doses. For infants over two months of age 5 minims t. i. d. is almost as constipating as opium (G. F. Still, King's College, London). The does of 5 minims should not be exceeded up to the second year.

If there is severe vomiting in the course of the discase, the stomach should be lavaged. It removes the fermenting material and toxins and has a direct sedative action on the gastric mucous membrane.

If blood occurs in the stools for several days, high irrigations thru a rectal catheter with tannic acid (one teaspoonful to the quart of boiled water) will be of service. Should there be a tendency toward bowel inactivity with high temperature, irrigation of the colon should be employed, using sterile water or normal saline solution.

Many writers have praised the use of the lactic acid bacillus, especially the Bulgarian bacillus, either in liquid cultures (one-half to 1 teaspoonful every 3 to 6 hours in water with a little sugar of milk) or the preparation of Bulgarian buttermilk which is fed to the infants. Most of them report good results in a large majority of cases which are of the fermental type (produced by saprophytic organisms) but claim no marked success in the treatment of cases which are parasitic in origin. The latter are to be combated by serotherapy and vaccines.

The use of stimulants, subcutaneous, saline solution, hydrotherapy and other measures would be necessary, according to indications as in any other severe illness. General measures such as physical rest, fresh air, frequent bathing, etc., of course, are not to be neglected.

"THE 'CARRIER' PROBLEM"

Paper Read Before the West Virginia State Medical Society, Fairmont, West Virginia, October 2, 1917.

By Arthur Lederer,
Chem. Eng., M. D., C. P. H., Director,
State Hygienic Laboratory,
Morgantown, W. Va.

It has long been known that mild cases of infectious diseases occur which are difficult or impossible to recognize. The fact, however, that germs of disease can maintain themselves and multiply in a person without causing any symptoms has been unknown until comparatively recent years. People who harbor pathogenic organisms without showing signs or symptoms of the disease are called "carriers." The discovery that germs frequently invade the body without causing disease is probably the most important discovery in preventative medicine since the demonstration of the bacterial origin of disease. Infection due to contact with carriers has become of prime importance to public health officials. Men may be carriers of pathogenic bacteria, protozoa and worms.

Persons may carry disease germs without having had the specific disease. These are called "healthy" carriers. It is well known today that "carriers" are a constant danger, not only to others but also to themselves. A carrier may be "acute"—that is, he may harbor organisms for a certain period immediately following a disease. A carrier may be "chronic," which case he harbors the organisms for months or years. A carrier may be "intermittent." The term "intermittent" intimates that the bacteria may be absent for longer or shorter periods.

For convenience I divide the "carriers" into five groups: the intestinal and urinary, the naso-pharyngeal, the type in which the origin of the disease is unknown, the venereal type and the parasitis carrier type other than intestinal.

One of the most important considerations is that of typhoid fever. Historically, the conception of the typhoid carrier state was directly evolved from the views set forth by Robert Koch in his famous address of November, 1902. Koch stated then that the typhiod fever convalescent who happened to harbor the specific germ, was the most fruitful source of future infection. Fecal carriers are much more common than urinary carriers and "chronic" carriers of this type are frequent. It is perhaps safe to speak of a chronic carrier as one who passes bacilli in feces six weeks after the fever returns to normal. In such cases the bacilli are often found in enormous numbers. There are cases on record in which the bacilli in feces have persisted for many years. Gregg (Boston Medical & Surgical Journal, 1908) found a woman whose blood gave a positive Widal reaction and who proved to be an intestinal carrier. She had suffered from typhiod fever 52 years previous to this examination. It is very likely that the endemicity of typhiod in certain localities is entirely due to the presence of "chronic" carriers. In this connection it is of interest to know that the percentage of female carriers exceeds considerably the percentage of male carriers. Some figures place the proportion of female to male carriers as five to one. Gallstone troubles have been definitely diagnosed in approximately 14 per cent of the chronic carriers. Chronic carriers belong as a rule to the middle or advanced age. Figures with reference to persistance of bacilli in feces following an attack of typhoid vary. On the whole it may be said, how-

ever, that 33 per cent of the cases continue to discharge typhoid bacilli three weeks after the onset of the disease, 11 per cent eight to ten weeks later, and 4½ per cent three months after the onset. There is no doubt but that a great many cases are discharged in hospitals and by private physicians which are either temporary or chronic carriers. A carrier may never have had the disease, although in a good many cases there probably was a slight attack at sometime or another. Soper's case known as "Typhoid Mary," claims never to have had the disease. Similar cases were reported by Houston, Sample and Roscoe and others. Quite frequently, typhoid bacilli may be found in the feces during the incubation period and this is a fact of great epidemiologic importance. Such an incubating case is frequently a source of danger, particularly in unsewered communities. Active studies have been made to determine the number of carriers among the general healthy population in two large cities. The number of carriers varied from 2 to 4 per cent. Carriers engaged in the handling of food are a great factor in the spread of typhoid. They are often responsible for milk epidemics. Studies have demonstrated that the number of typhiod cases due to contact with carriers varies in differetn localities from 5 to 30 per cent. The majority of carriers are apparently in perfect health. Some, particularly the urinary type, suffer occasionally from headache. Some intestinal carriers may show periodic intestinal disturbances and some exhibit neuroses.

The carrier state can be detected only by the application of bacterial methods. The Widal test can be obtained in the blood of typhoid carriers in 75 per cent of the cases. It is also well to keep in mind that 90 per cent of the people vaccinated against typhoid fever give a positive Widal. The second test to apply is the detection of the bacillus in the feces or urine. A single negative test is of no value. In searching for carriers, those who suffer from gallstones are first examined. The isolation of the baccillus from urine is ordinarily not essential in epidemiological work. The statement often made that a carrier strain is less ineffective than one from an acute case is not correct.

The problem of locating carriers in a community is often extremely difficult. I believe it would be wisest to follow up each acute case until it is certain that the individual has ceased to be a danger to the community. It is impossible to hold all cases until the bacilli have disappeared from the stools. The carriers simply have to be instructed in personal hygiene. Arrangements should be made for the routine examination of feces at regular intervals. Privies should be disinfected and personal cleanliness is of prime importance. It is very necessary to prevent these people from handling foods. In fact, legislative measures to this effect have been passed in many states. A large number of infections are due to cooks, dairy employees and food venders of various kinds. Hundreds of milk-born epidemics have been traced to such a source. Sympathetic, personal and tactful contact between the health department and the carrier is essential or else results are bound to fail.

At the present state of knowledge there is no method available of curing carriers. Vaccination of a healthy community is bound to reduce their number as time goes on. The number will also decrease with the number of cases. Any campaign directed against the eradication of intestinal carriers must also be applied with the broader view of diminishing active typhoid in a commu-

nity. There will probably always be some typhoid with us, due to contact infection with old chronic carriers, even though we have effectively shut off all other channels of infection.

To the group of intestinal carriers will have to be added those carrying the organisms of Asiatic Cholera, dysentery, para-typhoid and hook-worm disease. Nearly all that has been said of typhoid pertains more or less to these diseases. Chronic carriers of Asiatic Cholera are much less frequent since the exciting organism outside of the intestinal canal is very frail. It seems that here, likewise, the gall bladder serves as the reservoir of the bacillus. Undoubtedly some cholera has been spread through carriers.

As far as bacillary dysentery is concerned, an outbreak of this disease has rarely been traced to carriers.

There are undoubtedly a large number of people carrying hook-worm without showing any symptoms. The detection of these carriers depends upon the microscopic examination of the feces and the control is the same as in acute cases.

Of the para-typhoid it is the B type which we encounter in this country nearly exclusively. The danger from chronic carriers in this disease is probably slight and only a few epidemics originating from such source have been reported.

Of the naso-pharyngeal type, diphtheria stands out at present as one of the most prominent as far as the carrier problem is concerned. Loeffler himself, in 1884, found diphtheria bacilli in a person who did not exhibit the clinical symptoms of the disease. In 1894 Parke and Beebe examined the throats of 330 healthy people who had, so far as known, been in contact with diphtheria cases, and found diphtheria in 7.3 per cent of which, however, only 2.4 per cent proved virulent. Three years ago the U. S. Public Health Service conducted an investigation in Detroit to ascertain the distribution of diphtheria carriers. The examination was made after a time of greatly increased prevalence of diphtheria. Cultures were taken from healthy persons of all classes indiscriminately. About 1 per cent harbored the bacillus, but only about 0.1 per cent of the 4,000 individuals examined showed the virulent type. The figures obtained at Detroit are rather low in comparison with other observations which, as a rule, vary between 2 and 3.5 per cent. In school rooms in which there is an outbreak there may be as many as 50 per cent carriers, virulent and non-virulent types combined. It is claimed that most diphtheria carriers show an abnormal condition of the mucous membrane of the nasopharynx. The number of carriers is greater during an outbreak than later and this may account for the rather low Detroit figures obtained by the U. S. Public Health Service. The number of positive contact carriers may be very high. Chapin found in 14.4 per cent contacts infected out of a total of 4500; in other cities the figure obtained was approximately 10 per cent. Many outbreaks have been traced to carriers directly or through the medium of milk. A chronic diphtheria carrier may be spoken of as one who harbors the bacillus for more than three months. Ordinarily the diphtheria bacillus disappears in about 50 per cent of the cases by the time the membrane has disappeared. 5 per cent persist at the end of two months, 2 per cent at the end of three months and 1 per cent continue as chronic carriers.

The detection of diphtheria carriers is based upon bacteriological procedure.

Non-virulent strains are rarely encountered in clinical cases of diphtheria. An inflamed condition of the naso-pharynx and of the tonsils should always arouse suspicion. It is a significant fact that most chronic carriers show antitoxin in their blood. A very practical method for establishing whether a healthy diphtheria carrier constitutes a danger to himself has been put into our hands with the Schick test. The test consists in the intradermal injection of a small amount of diphtheria toxin. A local inflammatory reaction develops at the site of inoculation if the blood lacks in natural diphtheria antitoxin. A positive Schick test indicates susceptibility to the disease. A carrier giving a positive Schick test may come down with the disease, a carrier giving a negative test is immune to it. Even though he is carrier he will not contract the disease. It seems to me that the possibilities of this test have not been fully recognized. It is impracticable to stamp out diphtheria by "culturing" every person and by the isolation of all carriers. In fact, it is doubtful if much is to be gained by isolating carriers for a period longer than ten days after the disappearance of the exudata. The experience in Providence, R. I., seems to indicate that. In every community there are hundreds of carriers who can never be detected, and who could not be controlled if they were. An attempt to isolate an individual for a period of several months would not be tolerated for any length of time. Contacts carrying diphtheria bacilli should be given a prophylactic dose of antitoxin if the Schick test proves to be positive. The injection of antitoxin does not eliminate the bacilli from the throat of carriers. A mouth wash of 1 per cent hydrogen peroxide proves often satisfactory. Local cauterization is useless. Pyocyanoise (ferment of culture of B. Pyocyaneus) acts bacteriolytic, but the results have not been conclusive. Over-riding the throat by cultures of Stuph. pyog. aureus, sprayed into the nose and throat has been successfully employed in some cases. The discharge from the throat and nose should be disinfected. A search should be made for school carriers of the age of five to ten years, this being the most susceptible age-group. Carriers should not be permitted to handle foods, particularly milk.

Cerebrospinal Meningitis presents a most difficutl problem. It appears suddenly in localities previously exempt. In the great majority of cases the meningococcus disappears from the naso-pharynx four weeks after the onset of the disease. Various observers have found the organism in contacts. Buchannon of Glasgow found carriers among 26 per cent of contacts. The organism has rarely been found in people who have not, at some time or another, been in contact with an acute case or in contact with another carrier. Burns and Hohn in 1907 showed that the proportion of carriers decreased with the decline of an outbreak. The fathers in the family are more apt to be carriers than the motheds. Fluegge believes that carriers are ten to twenty times as numerous as cases. Only a small percentage of the carriers develop the disease, probably because of the natural immunity which most carriers possess.

A bacterial examination of all those who come in contact with cases is a hopeless task, considering the fact that a very large percentage of the population is infected during times of epidemic. Furthermore, cultures have to be taken under rigid precautions with the West swab from the posterior naso-pharynx, and planted immediately upon a special medium. This can only be done suc-

cessfully in a camp or community which can be absolutely controlled, and which has laboratory facilities close at hand. To locate carriers among the general population is hopeless and doomed to failure. The disease cannot be stamped out at the present state of our knowledge. Certain numbers of secondary cases may be prevented by the strict isolation of each new case reported. Active immunization with vaccine confers considerable immunity.

Nearly all that has been said concerning spinal meningitis applies to poliomyelitis. The attempts to control carriers in this disease are made still more difficult through our lack of knowledge of the etiology of the disease and its treatment. We know, however, that the infection is due to an organism harbored in the naso-pharynx. There is a suspicion that healthy carriers play an important role in spreading infection. The excellent work done in recent years at the Rockefeller Institute for Medical Research has thrown much light on the relation of carriers to the spread of this dread disease.

The cause of scarlet fever is unknown. It is therefore impossible to determine definitely the role of carriers in this disease. The chief source of infection is in the secretion of the nose and throat. True carriers, that is perfectly well persons, are sometimes reported. Chapin and Newsholns and Kerr have reported outbreaks due to true carriers. To prevent the spread of disease through carriers, cases should be promptly isolated.

As far as measles is concerned, there is little evidence that carriers are common. The only prophylactic measure consists in isolation.

Whooping cough is caused by the Bordet and Gengou bacillus which is found in the expectoration. Mild cases which do not develop the whoop are likely to spread the disease; this is especially common with adults.

Mumps are rarely spread by indirect contact or by a third person.

In Lobar Pneumonia the organism invades the lungs and the blood stream. Sternberg in 1880 found the coccus in his own saliva. Buerger found the coccus present in 50 per cent of normal mouths and 35 per cent of normal throats. He also found that the organism could be recovered for weeks from convalescents. Different strains of cocci vary greatly in their virulency. The prevention of carriers and their control is hopeless. There is no specific prophylaxis for pneumonia. The discharge should be disinfected and the public must be educated concerning the dangers of expectoration, street dust and inadequate ventilation.

Influenza, whenever it occurs, spreads rapidly and is kept alive in inter-epidemic years by carriers. Of 48 healthy individuals examined by Holt in New York, 16 yielded positive cultures. From the standpoint of health department administration it is impossible to detect and control such carriers.

Tubercle bacilli may be found in normal persons on the mucous surface of the mouth, throat or nose. Strauss, in 1894, recovered the tubercle bacillus from the nose of 29 well persons employed about tuberculosis wards. Jones, in 1900, found the tubercle bacillus in the nasal discharge of 11 out of 31 persons who had not particularly close contact with consumptives. It is not likely that the conditions in the mouth and nose are favorable for the development of the bacillus. Tuberculosis may invade the tissues and may remain latent for a considerable period of time. Latency as proven by autopsy is quite fre-

quent. Healthy carriers, however, do not constitute a source of infection.

To the third group belong carriers of diseases of entirely unknown etiology, such as small-pox and chicken-pox. There is no laboratory evidence that small-pox carriers exist but there is much clinical evidence that perfectly well persons are capable of transmitting the disease. Mild cases of small-pox are very numerous. Welch and Schamberg reported cases where there was no eruption at all. Armstrong reported three such cases in 1909. They occurred in infected families and subsequently did not yield to vaccination. Probably all secretions and excretions from the body may be infective at some time throughout the disease or during convalescence.

The chicken-pox carrier problem, if it is important, cannot be attacked until we find the means of laboratory diagnosis.

In the venereal group of carriers the term "carrier" is often incorrectly applied. These so-called veneral carriers represent either sub-acute, chronic or latent cases, which show no symptoms but which are cases in the clinical sense nevertheless. Latency is a striking feature in this group.

This holds also largely true for the fifth group which pertains to the parasite carrier other than intestinal type. Included in this group are malaria, Sleeping-sickness, Dengue Fever, Rocky Mountain Spotted Fever and Yellow Fever and a large number of other infections.

Summarizing, it can be said that carriers play an extremely important part in the spread of the disease which we dread most, and the problem does not offer hope for an early solution. We may as well admit that strict isolation of cases is a disappointment, particularly in the control of the naso-pnryngeal type. This is not to be taken as destructive criticism. Isolation does a certain amount of good, but when we consider for instance that for each case of cerebro-spinal meningitis we may have twenty healthy carriers spreading the disease among susceptible population, we begin to realize the comparatively small importance of isolation from the standpoint of the health officer and epidemiologist. The isolation of cases and contacts is a safeguard, however, which should be strictly adherd to, even though it does not get to the bottom of the evil. As far as intestinal carriers are concerned, we are more certain of our ground because we have the means at our disposal of detecting them and their number is comparatively limited. We are fortunate in being able to immunize the healthy population against most infectious intestinal diseases, and only continued and judicious propoganda stands between failure and success. With the naso-pharyngeal type of infection much remains to be done by the pathologist. The problem is not to cure the healthy carrier—desirable as that would seem—but to immunize the susceptible individual. What we want is, first of all, reliable tests like the Schick test which indicate whether an individual is likely to contract the disease or not. Lastly, and most important of all, we want to be able to immunize an individual successfully against possible attacks. If we succeed in this, the carrier problem will have ceased to be one. Each year marks some advanec in this direction and we are gradually heading towards this shining goal of preventative medicine.

NEPHRITIS, VARIETY CLASSIFICATION AND TREATMENT

Read at Fiftieth Annual Meeting of the West Virginia Medical Association, Fairmont, October, 1917.

By S. D. Hatfield, M. D.,
Iaeger, W. Va.

The Kidney, like other organs of the body, has been subjeet to inflammatory changes from the earliest history of the human raee.

Hippocrates noticed white clouds in the urine, which was no doubt the eondition we term Albuminuria which is most often found in functional disturbances of the kidneys. Soliceto, the noted Italian surgeon, had pointed out the assoeiated of dropsy, scanty urine, and hardened kidneys in the early part of the fourteenth eentury. The eorelation between dropsy and albuminous urine had been established by Wells and Blackwell about the year of 1813; but Richard Bright (1789-1858) was the first to count these symptoms with the peculiar inflammation of the kidneys, whieh he found in so many post mortems and his epoeh-making synthesis, soon made its way everywhere on account of its importance in medical praetice.

By the term Nephritis is meant an inflammation of the kidney and, as it is eommonly employed, a nonsuperative inflammation is implied. Non-superative Nephritis is often spoken of as Bright's disease, or Morbus Brightii, the terms Nephritis and Bright's disease being used interehangeably. Strictly speaking this is not eorrect. Bright deseribed those conditions of the kidney aeeompanied by albuminuria and dropsy so that his deseription did not include the group of nephritides in which there is no dropsy. So in reality it is not correet to speak of some of the diseased conditions of the kidneys eommonly spoken of as nephritis, as inflammations of the organ, for example the proliferative and exudative in eharaeter.

Let us be thoroughly theoretieal for a moment and say that a nomenelature of nephritis (of every kind) eannot be perfect until we describe every kidney in the terms of the ehanges that exist (1) in the glomerulus, (2) the tubule, and (3) the interstitial tissue. Even now we are assuming the tubule to be a unit, whereas a fuller knowledge of its different parts may prove it to be divisible; the accurate description of a particular kidney ought to be denoted as follows: glomerulus, change (x) of degree; tubule, ehange (x) of degree, and interstitial, change (x) of degree. Another kidney would show different changes in degree in its strnetures as would every organ examined. We would, at post mortem, find a dozen variations, temporary or permanent, in the glomernlus, any one of which may be accompanied by one or more of the variations to which the tubule would be liable. Combinations thus made by mathematical process are, to say the least, numerous. When we go farther and find that every sneh combination may be again eombined with any one of the variations in the interstitial tissue, the possibilities are legion. Such a nomenclatnre, alas, is inpracticable; yet every classifieation of nephritic conditions whieh has been promulgated is an attempt to sort out this almost infinite series, and the classifieation that disposes of the most is the best, bnt is equally eertain to be the most nnwieldy. Most of elinicians are eontent to use a working method of elassifieation and nomenelature in which we name the lesion by the feature which happens to predominate. Yet, two kidneys may present the

predominant feature while the other characters may differ widely and even the same predominant feature may sometimes have been attained by widely different processes. Then, having pointed out the inexactness of the "nomenclature of the predominant feature," we are inconsistent enough to fall back upon it.

Bright's disease comprise acute and chronic parenchymatous nephritis, chronic interstitial nephritis, and that form of acute interstitial nephritis characterized by the infiltration of fibroblasts, but not by leukocytes, all of which are toxic not infective nephritides; that is, the bacteria is not pathogenically present in the kidney itself as occurs in calculous, tuberculosis or other true infective nephritides. It is timely to point out here that those who make distinctions between chronic parenchymatious and chronic interstitial nephritis do so with the understanding that neither one exist alone: interstitial change never exists without an accompanying parenchymatous change, undoubtedly brought about by successive generations of tubular cells by the same agent, and parenchymatous change cannot exist long without interstitial alteration following or accompanying it. We are familiar with the sudden onset of acute parenchymatous nephritis which may appear from "a clear sky" within a short time, a matter of hours, perhaps minutes, and of course cannot be accompanied by an instantly produced fibrosis as the nature of the latter process is that it can only be slowly produced. An observable acute parenchymatous nephritis can, however, occur in any kidney, fibrosed though it be, provided that enough tubules be left to enable us to see the changes. We may go even farther than this and say that the process we call chronic interstitial nephritis, strictly speaking, is no more than a series of slight consecutive attacks, each of which leaves a few more fibroblasts behind, and that in the intervals, although the results of previous acute attacks remain, yet the disease is at an absolute standstill.

The ups and downs of a nephritic are familiar to the internist; the exacerbations referred to constitute the "downs."

There are many terms constantly used to indicate the various types of kidney found in nephritis, and one hears of small white kidneys, large white kidneys, small red kidneys, large red kidneys, and yellow kidneys, until we may be forgiven for becoming confused.

We do well to remember the extreme uncertainty of predicting the kind or form of kidney from the clinical symptoms and signs, and the habit of referring certain clinical signs to a "large white kidney" or some other such kind is not advisable.

Osler says, "That in all instances, changes exist in the epithelial, vascular, and intertubular tissues which vary in intensity in different forms: hence writers have described a tubular, a glomerular, and an acute interstitial nephritis." Cabot recognizes acute and chronic glomerular, a tubular, and vascular nephritis, which classification impresses me most forcibly as being the least confusing and yet most simple for the average student. Delafield cites the acute exudative and acute productive forms, the latter characterized by proliferation of the connective-tissue stroma and the cells of the malpighian tufts.

In no part of medicine, perhaps, does so much confusion exist with regard to terminology as with the renal diseases or nephropathies. It is easy to understand why. Classifications are needed and used for different purposes. A clas-

sification suited to the needs of the pathological anatomist will not suffice for the needs of the pathological physiologist. Or, again, classifications set up by the etilogist is often hard to harmonize with the classification based upon clinical symptoms, upon pathological-physiological phenomena, or upon post mortem findings regarding structure. Clinical men have often tried in their clinical classifications to value all kinds of studies, clinical, etiological, pathological-phsyiological, and pathological-hystological. This is desirable, but knowledge is not yet sufficiently advanced to permit us to make etiological, anatomical, and clinical classifications fully coincide. Every clinical classifiation must, at present, be in the nature of a compromise. We must needs make the best of the situation in which we find ourselves.

In conclusion of this though I wish to cite the forms given by Barker in his "Monographic Medicine," which are based upon clinical observations and study.

First, cases of acute renal disease, with or without oedema. Here are included acute tubular degenerations and acute glomerular nephritis (diffuse and focal).

Second, cases of subacute or subchronic renal diseases, with renal oedema occurring in their course. Here are included the sub-acute and sub-chronic glomerulortubular nephritis which gives rise to the large white and the large variegated kidney.

Third, cases of chronic renal disease, without renal oedema, lasting perhaps for years and terminating ultimately in apoplexy, cardiac failure, or uraemia. Here are included the primary contracted kidney, the secondary contracted kidney, and the focal form of atherosclerotic nephritis in which the kidney need not undergo general contraction.

The triple alliance is a term that we have seen and heard much discussion of by the editors of the country and has been the main topic of the day since the great European war broke out. The reference I wish to make to an alliance does not mean the International agreement which existed between Great Britain, France and Russia, or that between Germany, Austria-Hungary and Italy, but to the association of renal, vascular and heart disease. The clinician finding function of one of these great organs, in a small degree functionating improperly, at once consults the other two of the alliance, for what affects one of these parts soon produces its effect upon the other. We know that the normal physiology of any one of the triple alliance having been disturbed even in a small degree soon produces a change or some departure from the normal in the other two.

Theraputics is largely an effort to convert pathological into normal phsyiology. In the past, the Pharmecologist has confined his studies largely to the action of the drug on normal animals. In more recent years, experimental pathology and experimental theraputics have attempted, with excellent success, to fill in the gap. Through their work, the field of pathological physiology has been greatly extended. They have also furnished us with much needed information in regard to the action of drugs in pathological conditions, the only state that requires theraputic measures. Intelligent theraputics and pathological physiology should go hand in hand. The kidney is an organ which offers special facilities for physiological investigation. It is for this reason that pathological

physiology occupies much space in the discussion of the therapeutics of nephritis.

The treatment of nephritis may be considered under the head of prophylaxis, general principles, symptoms, and complications. The general principles include, first—to avoid, as far as possible, everything that might further tend to injure the kidney; second—as the kidney function is impaired, to relieve it of excessive work. This to be accomplished by proper diet and by calling on the skin and bowel to assist in the elimination of water and solids; third—the use of such measures as would tend to restore the kidney to its normal physiological function.

The treatment of nephritis is chiefly symptomatic. There are no specific remedies capable of modifying the degenerative process in the kidney. Our efforts in the acute forms must be devoted toward relieving the kidney from its work and removing, if possible, the cause of the trouble, thus tiding the matter over until the disease subsides and the physiological function of the kidney is wholly or partly restored. This restoration of function may be brought about in several ways. The acute process may subside and a regeneration of destroyed tissue take place, or the normal kidney tissue undergoes hyperplasia, or the parenchymatous nephritis passes into a secondary contracted kidney with increased urinary output of both water and solids, a restoration, in part, of the disturbed function. The hypertension and heart hypertrophy developing in interstitial nephritis leads to increased elimination through the kidney, and may be considered a compensatory process. Such a patient may live for years without any evidence of acute renal intoxication, the symptoms complained of being entirely the result of hypertension or increased blood pressure. So complete is the restoration of function in interstitial nephritis that death is infrequently due to uraemia, but to ruptured arteries or incompetent heart, the result of a long hyperteision. In these cases treatment must be directed toward increasing elimination through other channels, thus lowering the blood pressure and so regulating the patient's manner of living as to avoid overtaxing an already overloaded heart.

The treatment of chronic interstitial nephritis is chiefly directed toward the heart. In chronic parenchymatous or glomerural nephritis the heart is not usually involved and the treatment is confined to the kidney. An important part of the treatment is to avoid all those things, either in food, chemicals, or habits of the patient that might irritate the kidney; to arrange a diet with the minimum amount of proteid consistent with the demand of the body, and to supply corbohydrates and hydrocarbons in a sufficient quantity to maintain the proper nourishment of the individual, a point as essential as the restriction of the protoids. To faciliate elimination through the skin, a warm climate and suitable clothing are important. The bowels should be kept free to assist in the elimination of waters, salts, and nitrogenous waste. As the patient is usually anaemic and under-nourished, too free carnarsis should be avoided. For the anaemia induced by the continued loss of albumin, iron, or foods containing iron should be given. To lessen the edema, restriction of fluids and salts are important. I have found Tincture Apocynum indispensible for its specific action in reducing edema of my nephritic patients. Other valuable remedies are: eleterium, magnesium sulphate, and

milk of magnesia. The latter used exclusively for its soothing effect on the irritable mucous membrane of the stomach and intestinal canal. All these measures are also indicated in the treatment of acute nephritis. With the kidney acutely involved, extreme precaution must be taken to prevent further injury.

The propholactic management of nephritis consists in the extreme precaution against the chief etiological factors, among which are the acute and chronic infections, either exogenous or endogenous, cold, and pregnancy. Certain of the acute infectious diseases are especially liable to induce nephritis, as scarlatina, and the utmost care should be exercised by the parents to protect their children from contracting it. The importance of exposure and diet in defermining the development of scarlatinal nephritis has been probably overestimated. The bacterial toxins are no doubt the exciting cause, although cold may act as an important contributing factor. Tonsillar infections is another source of acute nephritis, and the child subject to repeated attacks of tonsilitis should have the tonsils carefully removed. Such a procedure is equally important in subjects of chronic nephritis, as tonsillar infections may be important factors in the very frequently observed acute exacerbations. Removal of diseased or abnormal tonsils also lessens the danger of contracting diphtheria, which next to scarlatina, is the most liable to be complicated by nephritis.

There is considerable difference of opinion as to the role of syphillis in acute nephritis. It may be difficult to determine in a given case whether the mercury or the syphilis is the cause of the trouble. However, we have authentic cases where syphilis was the etiological factor. At least, the prompt disappearance under treatment would lead to that inference.

There is a long list of chemical agents, many of which are frequently prescribed, which are capable of irritating the kidney and setting up an acute nephritis. It is important in the treatment of nephritis that drugs of this sort be avoided. It is also important in those cases of acute infections liable to kidney complications, that these agents be used with utmost care.

Although arsenic will produce a nephritis in animals, man tolerates it very well. The new arsenic preparation salvarsan, from present reports, is apparently only mildly irritating to the kidney, as only occasionally have albumin or sasts been reported after its use.

Endogenous toxins arising in the intestinal canal, the result of the decomposition of food or bacterial products, have been considered by many as important factors in nephritis. I have observed a number of such cases in my experience, which without question resulted from the intestinal disorders so common among infants and children during the summer months.

We have too little knowledge of the agencies responsible for the kidney of pregnancy to discuss intelligently prophyactic measures. To refrain from using drugs that may act as a renal irritant and to avoid exposure to wet cold is advisable. Although comparatively little is known of the importance of diet in the toxemia of pregnancy, it is advisable in threatened cases to reduce the proteids to the minimum consistent with maintaining the proper nutrition.

MEDICAL SOCIETY MEETING

Eastern Panhandle Association, Sessions to Be Held October 1, 2 and 3.

Marytown, W. Va., Sept. 12, 1918.

Dear Dr. Bloss:—

Owing to the desertion of help at the hotels in Harpers Ferry, probably due to the Conscript and War Conditions, the Committee of Arrangements of Eastern Panhandle Medical Society have changed the place of meeting of the State Medical Association from Harpers Ferry to MARTINSBURG. The date remains the same—October 1, 2, and 3.

Due to this fact the Programmes will probably be late in coming out. I could not get the necessary data.

I am enclosing copy of all the essential part of the Programme, a few things as order of business, officers and rules for papers, etc., being absent.

Very truly,

J. HOWARD ANDERSON.

FIFTY-FIRST ANNUAL SESSION, WEST VIRGINIA STATE MEDICAL ASSOCIATION, OCTOBER 1, 2, 3, 1918.

Register now! Registration Bureau, Lobby, Hotel Berkley.

The general meetings will be held in the Episcopal Parish House.

The Medical Section will be held in Kings Daughter's Hospital.

The Surgical Section will be held at the City Hospital.

The Commercial Exhibits will be held in Lobby of Hotel Berkley.

DELEGATES TO A. M. A.

C. R. Ogden.....1917-1918

F. LeMoyne Hupp.....1918-1919

EDITOR OF THE JOURNAL

J. R. Bloss.....Huntington

COMMITTEES

Public Policy and Legislation—G. A. MacQueen, F. LeMoyne Hupp and A. P. Butt.

Medical Economics—Robert E. Venning, E. H. Thompson and Charles O'Grady.

Medical Defence—J. W. McDonald, G. C. Jeffers and H. R. Johnson.

Arrangements—R. E. Venning, B. R. Ranson, T. K. Oates, J. M. Sites, G. J. E. Sponseller and Howard Osburn.

Workman's Compensation — W. W. Golden, C. R. Ogden, S. R. Holroyd, G. A. MacQueen and J. Howard Anderson.

Reception—C. J. E. Sponseller, J. M. Sites, R. E. Venning, T. K. Oates, W. T. Henshaw and J. M. Miller.

Scientific Work—S. R. Holroyd, A. P. Butt and J. Howard Anderson.

PRELUDE TO GENERAL ASSEMBLAGE

Monday, September 30—Council and House of Delegates

The Council convenes at Hotel Berkley, Monday evening, 8:00 o'clock, thereafter at the call of the Chairman.

The House of Delegates will meet at Hotel Berkley, Monday evening, 9:00 o'clock, thereafter at the time and place designated by the President.

GENERAL ASSEMBLAGE

Tuesday, October 1st, 9 A. M.—Episcopal Parish House

Call to Order, Pres. S. R. Holroyd, M. D., Athens.

Invocation, Rev. Henry P. Hamill, D. D., Martinsburg.

Address of Welcome, H. G. Tonkin, M. D., Mayor.

Response, A. S. Bosworth, M. D., Elkins.

SCIENTIFIC PROGRAMME

1. Berkley Springs: History, Medical Qualities, Report of Cases—M. F. Hamilton, M. D., Mannington.

2. The Medical Liar—W. W. Brown, M. D., Shenandoah Junction.

Tuesday, October 1, 1:30 P. M.—Episcopal Parish House

3. Lessons Back Home From Army Quarantine—S. S. Wade, M. D., Morgantown.
4. Sanitary Management of the Common Infections—S. L. Jepson, M. D., Charleston.
5. Syphilis in Relation to Venerial Disease Control—R. W. E. Cole, M. D., Charleston.
6. The Sanitary Survey as a Basis for Municipal Activity—Mayo Tolman, Charleston.
7. Transfusion: Report of Cases—J. R. Caldwell, M. D., Wheeling.

Tuesday, October 1, 8 P. M. Episcopal Parish House

8. President's Address—S. R. Holroyd, M. D., Athens.

Impromptu Reminiscences.

GENERAL SESSION

Wednesday, October 2, 9 A. M. Kings Daughter's Hospital

9. Oration in Medicine: Medical Stewardship and Medical Therapy—R. A. Ashworth, M. D., Moundsville.
10. A Discussion of Intussusception from the Viewpoint of the General Practitioner—S. D. Hatfield, M. D., Laeger.
11. Typhus Fever: An Epidemic in the Coal Field—V. L. Wetherby, M. D., Wilcoe.
12. Psychic Treatment of Tuberculosis—E. E. Clovis, M. D., Terra Alta.
13. Artificial Pneumethorax in the Treatment of Tuberculosis—R. U. Drinkard, M. D., Wheeling.

Wednesday, October 2, 1:30 P. M. Kings Daughter's Hospital

14. The Fatigue Diseases of the Stomach and Thyroid—John Rogers, M. D., New York.
15. The Importance of Thorough Neurological Examination of the Patient by the General Practitioner—J. C. King, M. D., Radford, Va.
16. The Short Circuitting of the Colon and Removal of the Same for the Treatment of Insanity — L. H. Foreman, M. D., Buckhannon.
17. Abnormalities in Conception—C. H. Keesor, M. D., Wheeling.

Wednesday, October 2, 8 P. M. Banquet

HOUSE OF DELEGATES

Thursday, October 3, 9 A. M. Episcopal Parish House

Election of Officers.

Unfinished Business.

GENERAL ASSEMBLAGE

Thursday, October 3, 10 A. M. Episcopal Parish House

18. Medical Science and the World War—Aaron Arkin, M. D., Morgantown.
19. Food and Intervals of Feeding in Infancy—C. L. Holland, M. D., Fairmont.
20. Acute Otitis Media in Children—M. H. Maxwell, M. D., Keyser.
21. Vaccine Treatment of Whooping-cough — J. L. Miller, M. D., Thomas.

COUNCIL

Meeting at close of General Assemblage at place designated by the Chairman for Reorganization and Transaction of Business.

SURGICAL SECTION PROGRAM

Surgical Section of the West Virginia State Medical Association

Wednesday, October 2, 9 A. M.—City Hospital

1. Chairman's Address — Chas. S. Hoffman, M. D., F. A. C. S., Keyser.
2. The Law and the Surgeon—Col. Forrest W. Brown, Charles Town.

2½. Oration in Surgery: The

Operative Treatment of Fracture—C. F. Hicks, M. D., F. A. C. S., Welch.

3. Goiter—Roy Ben Miller, M. D., Parkersburg.
   (a) Cases suited and unsuited for operation.
   (b) Dangers of operation and how to avoid.
   (c) End results of operation—J. Ross Hunter.
   General Discussion.
4. How Shall We Treat the Infected Gall Bladder and Bile Ducts?—Chester R. Ogden, M. D., F. A. C. S., Clarksburg.
   Discussion opened by Hugh G. Nicholson.
   (a) Cholecystectomy vs. Cholecystostomy—Wade St. Clair.
   General Discussion.
5. Abdominal Drainage—Frank LeMoyne Hupp, M. D., F. A. C. S., Wheeling.
   Discussion opened by J. E. Cannaday.
   (a) Kinds of drains to use and when to remove—R. J. Reed.
   General Discussion.

Wednesday, 1:30 P. M.
City Hospital

6. Exhibition of Splints and Fracture Appliances. You are invited to exhibit anything you may have of home-made construction. We have the promise of an exhibit of ice tongs or calipers, Steinman's pins, Blakes' and Balkan frames.
7. Exhibition and Description of New Instruments and Appliances—W. P. Megrail, M. D., Wheeling.
8. Ceserean Section vs. High Forceps—W. A. McMillan, M. D., Charleston.
   Discussion opened by J. E. Rader.
   (a) Infrequency of the need of either section or forceps as demonstrated by 20 years' experience in the coal fields—J. L. Miller.
   General Discussion.
9. The Baneful Influence of Uterine Displacement Upon the Ovaries—Robert Jeffrey Reed, M. D., F. A. C. S., Wheeling.
   Discussion opened by R. E. Venning.
   (a) How to avoid displacements—E. H. Thompson.
   (b) Obselete operative proceedures for correction of displacements—S. M. Mason.
   (c) Obsolete mechanical appliances for correction of displacements—H. P. Linsz.
   (d) How soon after labor should displacements be corrected?—H. D. Hatfield.
   General Discussion.
10. Blood Transfusion With Potasium Citrate Solution—R. E. Venning, M. D., Charles Town.
    Discussion opened by H. M. Campbell.
    (a) Advantages and disadvantages of citrate solution as gathered from recent literature—M. H. Maxwell.
    General Discussion.
11. Hare Lip—Chas. M. Scott, M. D., F. A. C. S., Bluefield.
    Discussion opened by A. K. Kessler.
    (a) Most suitable age—H. H. Carr.
    (b) Causes of failures—C. S. Hoffman.
    General Discussion.
12. Intestinal Stasis With Reference to the Pathology Found in the Terminal Heum—Wm. R. Laird, Jr., M. D., Hansford.
    Discussion opened by F. L. Hupp.
    General Discussion.

13. Post Operative Treatment in Surgical Cases—C. M. Rammage, M. D., Fairmont.
    Discussion opened by G. C. Rodgers.
    (a) Use of sedatives—Jas. R. Bloss.
    (b) When and how to evacuate the bowels—W. S. Fulton.
    (c) Feeding—A. M. Statts.
    (d) How soon should the patient get out of bed?—Earl Glass.
    (e) Are abdominal supports of any value?—M. B. Williams.
    General Discussion.

It will facilitate matters if those wishing to discuss papers will hand their names to the Chairman or Secretary in advance.

Election of section officers will be held at such time as seems most suitable to the Chairman.

ANNOUNCEMENTS AND COMMUMICATIONS

Dear Doctor Bloss:—

Some how the fact that I am in the Army Medical Corps, as a captain, has not reached those who seem to feel the burden of getting the profession into government service.

My wife writes we from Elizabeth, W. Va., that Maj. Cannaday has written me urging that I enlist.

I arrived here August 10, 1918, and am doing my best to keep step with the other 1200 physicians here, drilling each day one or two hours without halt in the dust and hot Georgia sun, is just the hardest work any one ever did, but no one complains.

Respectfully,
P. W. McCLUNG,
Company 19, 5th Battalion,
Camp Greenleaf, Chickamauga Park, Ga., August 18, 1918.

VOLUNTEER MEDICAL SERVICE CORPS OF THE UNITED STATES

Central Governing Board

Surg. Gen. William C. Gorgas, U. S. A.
Surg. Gen. William C. Braisted, U. S. N.
Surg. Gen. Rupert Blue, U. S. P. H. S.
Provost Marshal Gen. Enoch H. Crowder, U. S. A.
Dr. Franklin Martin.
Dr. Edward P. Davis, president.
Dr. John D. McLean, vice president.
Dr. Charles E. Sawyer.
Rear Admiral Cary T. Grayson, U. S. N.
Dr. F. F. Simpson.
Dr. Frank Billings.
Dr. H. D. Arnold.
Mr. Frank Persons, American Red Cross.
Dr. Victor C. Vaughan.
Dr. William H. Welch.
Dr. Robert L. Dickinson.
Col. Reuben B. Miller, U. S. A.
Surg. R. C. Ramsdell, U. S. N
Col James Easby-Smith, U. S. A.
Dr. Joseph Schereschewsky, U. S. P. H. S.
Dr. C. H. or W. J. Mayo.
Dr. William Duffield Robinson.
Dr. George David Stewart.
Dr. Duncan Eve, Sr.
Dr. Emma Wheat Gillmore.

Governing Council

Surg. Gen. William C. Gorgas, U. S. A.
Surg. Gen. William C. Braisted, U. S. N.
Surg. Gen. Rupert Blue, U. S. P. H. S.
Provost Marshal Gen. Enoch H. Crowder, U. S. A.
Dr. Edward P. Davis.
Dr. Franklin Martin.

Executive Committee

Dr. Edward P. Davis, president.
Dr. John D. McLean, vice president.
Dr. Charles E. Sawyer, secretary.
Col. Reuben B. Miller, U. S. A.
Surg. R. C. Ramsdell, U. S. N.
Col. James S. Easby-Smith, U. S. A.
Dr. Joseph Schereschewsky, U. S. P. H. S.
Dr. Emma Wheat Gillmore.
Dr. Franklin Martin.
Dr. F. F. Simpson.

Rules of Organization

I. *Name.*—The name of the organization shall be the Volunteer Medical Service Corps of the United States.

II. *Object.*—1. The object of the Corps shall be to mobilize the medical profession in the present emergency in order to provide for the health needs of the military forces and civil population of the country.

2. Services of members will be called for and rendered in response to requests to the Central Governing Board from the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, or the General Medical Board of the Council of National Defense.

III. *The Corps.*—The Corps shall consist of all members of the organization. The management of the Corps shall be vested in a Central Governing Board.

IV. *Central Governing Board.*—The Central Governing Board shall be appointed by the Council of National Defense and approved by the President of the United States.

V. *Officers.*—The Central Governing Board shall direct the activities of the Corps and shall select from among its own members a president, a vice president, and a secretary.

VI. *State Governing Boards.*—1. The State Governing Boards shall consist of the members of the State Committees, Medical Section, Council of National Defense. The State Committees shall select, subject to the approval of the Central Governing Board, not less than five of their members who are eligible for election in this Corps to act as the executive committees of the Volunteer Medical Service Corps in the respective States.

2. The duties of the executive committee of the State Governing Board shall be to consider applications for membership in the Corps from the respective States and to submit recommendations regarding these applications to the Central Governing Board.

3. The State Governing Board shall aid in the work of the executive committee of the State and perform such other duties as may hereafter be deemed essential by the Central Governing Board to accomplish the purpose for which the Corps was created.

VII. *Membership.*—1. Every legally qualified physician holding the degree of doctor of medicine from a legally chartered medical school, without reference to age or physical disability, may apply for membership in the Volunteer Medical Service Corps, provided he is not already commissioned in the Government service.

2. Women physicians are eligible.

3. Application for membership in the Volunteer Medical Service Corps shall be made upon blanks furnished for that purpose by the Central Governing Board for proper classification according to training and special fitness.

4. Any member of the Volunteer Medical Service Corps who wishes to change his classification may appeal to the Central Governing Board.

5. The Central Governing Board shall be empowered to elect from time to time to the Volunteer Medical Service

Corps members of sanitary engineering and hygienic professions.

VIII. *Method of election.*—1. The members of the Corps shall be graduates in medicine who are licensed to practice medicine in their respective States, who have made application for membership, who meet the qualification requirements that are now or shall from time to time be established by the Central Governing Board, who are eligible as under Article VII above, and who shall be elected to membership in the Corps by the Central Governing Board.

2. Each person elected to membership in the Corps shall be designated as a member of the Volunteer Medical Service Corps.

3. It shall be the duty of each member of the Volunteer Medical Service Corps to notify the Central Governing Board when he accepts a Government commission.

IX. *Insignia.*—1. Members of the Corps shall be authorized and required to wear the insignia of the Corps.

2. The insignia and certificate shall be secured by members of the Corps under such regulations as may be determined upon by the Central Governing Board.

3. The insignia shall not be loaned to any person not a member of the Corps, nor shall it be worn after notification that eligibility to the Volunteer Medical Service Corps has ceased to exist; and it shall be returned on demand of the Central Governing Board.

X. Any member of the Corps may be expelled for conduct which, in the opinion of the Central Governing Board, is derogatory to the dignity of the Corps or inconsistent with its purposes.

XI. The Central Governing Board shall be authorized to provide such regulations as shall from time to time become necessary.

XII. *Authorization.*—The organization, the insignia, and the certificate have been authorized by the Council of National Defense.

Volunteer Medical Service Corps organization:

1. Provides means for obtaining quickly men and women for any service required.

2. Furnishes recommendations and necessary credentials to assure the best of medical service both military and civil.

3. Determines beyond question the attitude of the individual toward the war.

Object of Corps

1. Placing on record all medical men and women in the United States.

2. Aiding Army, Navy, and Public Health Service in supplying war medical needs.

3. Providing the best civilian medical service possible.

4. Giving recognition to all who record themselves either in Army, Navy, Public Health activities, or civilian service.

Working Plans

All matters pertaining to the organization will be under the direction of a Central Governing Board, authorized by the Council of National Defense and approved by the President of the United States, and its affairs will be conducted from the general headquarters of the Volunteer Medical Service Corps at Washington, D. C., under the Council of National Defense.

Operating System

1. Central Government Board of 25.

2. Forty-nine State executive committees.

3. One representative in each county in every State.

NOTE.—(*a*) All men to be appointed to State and county committees preferably over 55. (*b*) Each State executive committee to consist of five in the smaller States and one additional member in each of the larger States in proportion to each 1,000 medical inhabitants (to be nominated by State committees, Medical Section, Council of National Defense, from among their own members). (*c*) Each county of 50,000 population or under should have one representative. All counties having over 50,000 population should have one additional county representative for each 50,000 population or fraction thereof. All county representatives to be nominated by the State executive committee.

Duties

Central .Governing .Board.—To receive and pass upon all appointments.

State Governing Board.—To receive facts from county representatives and make recommendations to Central Governing Board.

County Representatives.—To submit facts to State committees according to advice from Central Governing Board or State executive committees.

WAR WORK FOR YOUNG WOMEN

The Surgeon General's Office, War Department, has issued an urgent call for young women to serve in reconstruction hospitals at home and abroad. The Normal School of Physical Education, Battle Creek, Michigan, which is affiliated with the Battle Creek Sanitarium, wishing to do its share toward winning the war, has inaugurated a course in physiotherapy, which meets the requirements of the War Department. Courses begin October 1st and February 1st. Length of course is 4 months. The cirriculum consists of Anatomy, Physiology, Hygiene, Bandaging, Active and Passive Movements, Hydrotherapy, Massage, Electrotherapy, and Clinics.

The medical profession are asked to direct the attention of young women who are planning to engage in war work to this unusual opportunity.

Further information may be obtained from Frank J. Born, M. D., Director of the School.

TO PHYSICIANS OF AMERICA

Surgeon General Gorgas has called for 1,000 graduate nurses a week—8,000 by October 1.

Twenty-five thousand graduate nurses must be in war service by January 1—in the Army Nurse Corps, in the Navy Nurse Corps, in the U. S. Public Health Service in Red Cross war nursing.

This involves withdrawal of many nurses from civilian practice and necessitates strict economy in the use of all who remain in the communities.

You can help get these nurses for our sick and wounded men by:

Bringing this need to the attention of nurses.

Relieving nurses where possible wholly or in part from office duty.

Seeing to it that nurses are employed only in cases requiring skilled attendance.

Encouraging people to employ public health nurses.

Instructing women in the care of the sick.

Inducing high school and college graduates to enter the Army School of Nursing or some other recognized training school for nurses.

Encouraging nurses to go to the front involves real personal sacrifice and added work on the part of the physicians whose duty it is to maintain the health of our civilian second line defense—

But the men who are fighting for their country in France need the nurses.

—Department of Nursing, American Red Cross, Washington, D. C.

From Lieut. Colonel F. F. Simpson, M. C., N. A., Chief of Section of Medical Industry.

To the Doctors and Dentists of the Country.

Subject: Utilization of Platinum in Unused Instruments.

1. In view of the limited supply of platinum in the country and of the urgent demand for war purposes, it is requested that every doctor and dentist in the country go carefully over his instruments and pick out every scrap of platinum that is not absolutely essential to his work. These scraps, however small and in whatever condition, should reach governmental sources without delay, through one of two channels:

(*a*) They can be given to proper accredited representatives of the Red Cross who will shortly make a canvas for that purpose.

(*b*) They may be sold to the government through any bank under the supervision of the Federal Reserve Board. Such banks will receive and pay current prices for platinum.

By giving this immediate attention you will definitely aid in the war program.

2. It is recognized that certain dental and surgical instruments requiring platinum are necessary, and from time to time platinum is released for that purpose. It is hoped, however, that every physician and every dentist will use substitutes for platinum for such purposes wherever possible.

3. You are warned against giving your scrap platinum to anyone who calls at your office without full assurance that that individual is authorized to represent the Red Cross in the matter.

—Lieut. Col. F. F. Simpson, M. C., N. A., Chief of Section of Medical Industry.

FROM STATE COUNCIL OF DEFENSE, CHARLESTON, W. VA.

All persons, firms or corporations residing in other states but having their properties, industries or other interests in West Virginia are requested and expected to make subscriptions to the Fourth Liberty Loan and to other war activities in proportion to the value and character of their interests and these subscriptions shall be allotted to the communities and counties in which their interests or parts thereof are situated; and that such persons, firms and corporations should aid in securing like subscriptions and credits by their employes to the end that there may be perfect harmony and loyal co-operation among the people and interests of every community and county of the state.

That is the resolution adopted by the State War Convention in session at Charleston this week which was composed of the State and County Councils of Defense, the State and County Liberty Loan Committees, the Four-Minute Men and other war activities. It is just a call for the fairness and squareness which is in evidence everywhere in connection with "winning the war" and it is not expected to create anything which would tend to interfere with harmonious war activities.

In fact most of the corporations in the state are working along such lines and are giving war work organizations in counties and communities the heartiest co-operation. W. S. John of Morgantown, made the motion and W. H. Somers of Morgan, Fred L. Fox of Braxton, R. L. Dunlap of Summers, W.

A. Beavers of Taylor, I. D. Morgan of Wetzel and Senator Gray Silver of Berkley county, seconded it. Frank D. McCoy of Sistersville, suggested that railroads be reached through W. G. McAdoo, Director General, which was adopted as a happy thought.

It was stated at the Convention that a few corporations doing business in West Virginia had purchased bonds in the Third Loan in other states.

'MOUNTAINEERS ALWAYS FREE' —WAR WORK, WEST VIRGINIA COUNCIL OF DEFENSE

Charleston, W. Va.—The coordination of war activities in West Virginia is under way as one result of the State War Convention held here last week. The National Council of Defense works through State Councils of Defense and the plan is to have the West Virginia State Council of Defense do more efficient work by having the support of the County Councils of Defense which will in turn delegate authority to Community Councils of Defense in each magisterial district and if possible in every community.

The necessity for co-operation in war activities is generally recognized and when the State and County Councils of Defense, the State and County Liberty Loan organizations and the State organization of Four-Minute Men gathered here last week the desirability of systematic control of all campaigns, movements and drives was so emphasized by all war working activities that a resolution to this effect, which was passed by the War Convention, was endorsed by leading representatives of all war activities.

The outlook for a long war made it evident that there should be a supervising control of war activities in which every citizen, man and woman, should have a part. The wasted effort in perfecting different organizations for the various campaigns impresses all who seek the most efficient conduct of public affairs and it is the concensus of opinion of leaders that greater resutls can be accomplished by the perfection of a mighty war machine which will cover the state thoroughly and still permit each community to handle its own problems in line with the requests of the government at Washington.

The Food Administration, the Fuel Administration and other departments of the government had representatives here for the Convention and George L. Goodwin, State Director for the United War Work Campaign, which will be the next big drive after the Fourth Liberty Loan, gave the plan of coordination his hearty approval.

West Virginia patriots now are devoting their preliminary efforts to the Fourth Liberty Loan Campaign which will start September 28. This call is for another national loan, probably for $6,000,000.00 (the exact amount is yet to be announced and the quota for West Virginia and its fifty-five counties then to be apportioned) and with an organization in every county and both a men's organization and a womens' organization in most counties and the school children active it is hoped that there will be such a wide buying of Liberty Bonds among the people generally that the financing of the war will be the united effort of every individual who is possibly able to subscribe.

In the Third Liberty Loan the number of bond buyers was gratifying but former Governor W. A. MacCorkle emphasized at the recent War Convention in Charleston, that this is a war of the "whole people" and urged that as many buyers of bonds as could possibly be secured must be the aim of the organization that each individual might have the opportunity of providing the boys at the front and in military training with every bit of equipment possible to be employed.

Following the Fourth Liberty Loan Campaign the Food Administration plans to bring to the attention of West Virginia people its latest conservation program and next in order comes the United War Work Campaign which has been set for November 11-18. The various war charities, outside of the American Red Cross, have been merged into this campaign at the request of President Wilson and in line with the disposition to forget creed, color and everything else in the winning of the war the organizations deemed essential in war activities (which are almost as necessary as the artillery and the quartermaster's department yet relying on voluntary subscriptions for support like the Red Cross) will be comined into one big campaign. Seven widely different organizations have been united, as follows:

1. Young Men's Christian Association.
2. Young Women's Christian Association.
3. War Camp Community Service.
4. American Library Association.
5. Catholic War Work Council (including the Knights of Columbus).
6. Jewish Welfare League.
7. Salvation Army.

A few years ago it would have been impossible for these seven organizations to have worked together haromniously —but the war has changed all that.

War work activities, following the November 11-18 drive have not as yet been determined but former Governor MacCorkle predicted a fifth, a sixth and even a seventh Liberty Loan at the War Convention in Charleston and Governor John J. Cornwell in an address to that gathering emphasized that it had become a "war of resources" quite as much as man-power while J. Walter Barnes, Federal Fuel Administrator, declared that West Virginia was doing more to win the war than any other states by providing coal as well as men and money.

The perfection of a mighty war machine in West Virginia to handle such campaigns as well as carry out the military requirements allotted to draft boards and co-operate with the government provisions for getting every man between the ages of 18 and 45 engaged in war work (that is something to help win the war) requires the enthusiastic help of man, woman and child and Governor Cornwell has assured President Wilson and General Crowder that "slackers" are to be "few and far between" among the West Virginia hills.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., EDITOR
C. R. ENSLOW, M. D.
J. E. RADER, M. D. ASSISTANT EDITORS

Huntington, W. Va., Oct., 1918

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

ADVERTISEMENTS

Advertising forms will go to press not later than the 10th of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

Editorial Office: United Woolen Mills Building, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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ALTERNATE—Henri P. Linz, Wheeling, W. Va.

CHAIRMAN OF THE COUNCIL—G. D. Jeffers, Parkersburg, W. Va.

COUNCIL

FIRST DISTRICT—J. W. McDonald, Fairmont, W. Va., one-year term; H. R. Johnson, Fairmont, W. Va., two-year term.

SECOND DISTRICT—C. H. Maxwell, Morgantown, W. Va., one-year term; T. K. Oates, Martinsburg, W. Va., two-year term.

THIRD DISTRICT—M. T. Morrison, Sutton, W. Va. one-year term; C. R. Ogden, Clarksburg, W. Va., two-year term.

FOURTH DISTRICT—R. H. Pepper, Huntington, W. Va. one-year term; G. D. Jeffers, Parkersburg, W. Va., two-year term.

FIFTH DISTRICT—W. H. St. Clair, Bluefield, W. Va. one-year term; J. E. McDonald, Logan, W. Va., two-year term.

SIXTH DISTRICT—P. A. Haley, Charleston, W. Va., one-year term; H. L. Goodman, Charleston, W. Va., two-year term.

CHANGE OF MEETING

Fellow Members, please note the change of the Fifty-first Annual Meeting from Harpers Ferry to Martinsburg. The date remains the same, October 1st, 2nd and 3rd. This sudden change is necessitated by conditions arising which render the management of the hotel at Harpers Ferry unable to provide accommodations.

VOLUNTEER MEDICAL CORPS

Every physician in the state has already, or will soon have, received a blank application for admission to membership in this organization. In this issue of The Journal will be found a statement of the purposes of this body.

There is no question as to the exigencies of our war situation. The medical profession must do its part. The men who are put in classifications which will exempt them and who are not making plans for joining the Medical Corps must still feel it is incumbent upon them to do what may be possible to aid in the prosecution of the war to our ultimate and victorious completion of it.

I feel sure that each man will carefully and prayerfully consider this mat-

ter and then send in his application for membership in the Medical Volunteer Corps.

THE NATIONAL BIRTH CONTROL LEAGUE

Recently we received a circular letter from the Executive Secretary of this body asking our views.

To quote from this letter:—

"The objects of this association are:

1. To secure the repeal or amendment of all laws prohibiting the giving out of information concerning birth control through the prevention of conception.
2. To collect and distribute facts in regard to the legal status of birth control education in the United States and other countries."

I hesitate to say what my ideas are. For a number of years I have been interested in this question. Some twenty years' experience with the insane, defectives, etc., has given me some very prominent views on this subject.

Will our members please take up the discussion and give their views upon it for publication? It is a question we must face and it is far better to talk it over now and come to some definite conclusion.

THE FOURTH LIBERTY LOAN

The campaign for the Fourth Liberty Loan begins September 28 and closes October 19. While the amount has not yet been announced, it is generally conceded it will be for a larger amount than any of the preceding loans. The American people, therefore, are called upon to raise a large sum of money in a shorter length of time than ever before. There is need, therefore, for prompt action—prompt and efficient work and prompt and liberal subscriptions.

We have a great inspiration for a great effort. The news from the battle front inspires every American heart, not only with pride and patriotism but with a great incentive to do his or her part. There is no shirking, no shifting of the individual burden, no selfishness by American soldiers in France; there should be none here. We are both supporting the same country and the same cause—our Army in one way, ourselves in another. Theirs is the harder part, but at least we can do our part as promptly and loyally and efficiently as they do theirs.

WHAT YOUR SUBSCRIPTION MEANS

When you subscribe to a Liberty Loan you subscribe to the sentiment that the world must be made safe for democracy and subscribe to the fund that is to make the world safe for democracy.

You subscribe to the belief that innocent women and children on unarmed ships shall not be sent to the bottom of the sea; that women and children and old men shall not be ravished and tortured and murdered under the plea of military necessity; that nurses shall not be shot for deeds of mercy, nor hospital ships sunk without warning, or hospitals and unfortified cities be bombed or cannonaded with long-range guns.

You subscribe to the doctrine that small nations have the same rights as great and powerful ones; that might is not right, and that Germany shall not force upon the world the dominion of her military masters.

You subscribe, when you subscribe to a Liberty Loan, to the belief that America entered this war for a just and noble cause; that our soldiers in France and our sailors on the sea are fighting for right and justice.

And you subscribe to the American

sentiment that they must and shall be powerful, efficient, and victorious.

A FIVE MILLION ARMY MEANS 50,000 MEDICAL OFFICERS

With an army of three million men in the field or in training and as contemplated, an expansion of this force to five million men, the Surgeon General must have in the Medical Reserve Corps at least fifty thousand doctors.

The Medical Corps must keep a pace in growth with the army expansion and it behooves every doctor in the United States between the age of 21 and 55, who is physically, morally and professionally fitted, to arrange at the earliest possible moment, his personal affairs so as to offer his services to his country in the capacity of a medical officer.

The United States is in the war to do her part in winning the struggle and this can only be accomplished by a large and well trained body of troops adequately cared for by sufficient number of medical officers. The importance of the doctor's service and its relation to the successful outcome of the war cannot be under-estimated.

As the mobile forces increase in size, so is there an expansion of Base Hospitals and other Institutions for the care of the sick and wounded and there should be no lack of officers when required to give to our patriotic boys, that professional attention which is so essential.

It is well for the medical profession of the United States to realize at once that a Medical Reserve Corps of at least 50,000 doctors will be required to meet the demands of the Surgeon General and upon which Corps he can draw for his medical officers.

We believe by this time that the profession of this country must be fully alive to the needs of the Service, so let every doctor who is qualified, feel that he is doing not only his patriotic duty in offering his services as a medical officer, but is relieving the tension of the Surgeon General's Office by placing at the command of the Chief Officer of the Medical Department an adequate force without the frequent beating of drums to supply the necessary number with each increase of the mobile forces.

If you have not already received an application blank for commission in the Medical Reserve Corps, your nearest Examining Board or the Editor of this journal will be glad to supply you.

Medicine

TREATMENT OF INITIAL IMPETIGO CONTAGIOSA

H. G. Adamson, M. D., F. R. C. P., London, in British Medical Journal.—The secret of success consists in removing all trace of the crust and overhanging blister margins. Frequent mopping with hot water accomplishes this, which, with the exception of what must be picked off with the forceps, the patient can do himself. The eroded surfaces are mopped with the lotio hydrarg. perchlor. 1:6,000, or with lotio cupri sulphatis 1:8,000. The ung. hydrarg. ammon. chlor. is applied at night. Boric and sulphur ointments are also used. Obstinate patches of ecthyma are treated by thorough applications of this: Argent, nit. gr. 15; sp. aetheris nit. 1 fluidounce.

THE USE AND ABUSE OF PITUITRIN

Dr. George W. Kosmak, of New York City, referred to the widespread and unlimited employment of this drug in obstetrics, claiming that the now extensive clinical data published warranted the formulation of definite indications for

its use. No satisfactory standards had as yet been devised, the physiological basis being unwarranted becaues of the specific variations in the potency of the extract. Moreover, other organic substances would stimulate the isolated uterine muscle directly. Indications for use of pituitrin were limited to the simple uterine inertia multiparae without fetal or maternal dystocia and a patient not exhausted. The author's personal experience and observations of cases referred to the Lying-In-Hospital, had led him to add his confirmation to the warnings already published.

The use of pituitrin in Caesarean section was not as certain as that of ergot, and could not be regarded as a substitute, being merely an aid to forceps in certain cases where stimulation of the uterine contractions might drive the head to a more suitable level for instrumental delivery. Pituitrin was of especial value in curettage for incomplete abortion; also useful in metorrhagia of young girls and in older women with small fibroids or inflammatory lesions in the adnexal regions resulting in hyperemia.

CONTINUED TACHYCARDIA

Continued tachycardia is an affection of adult life and appears to be unknown in childhood. The affection may be looked upon as the result of a bulbar or bulbospinal neurosis and some cases are undoubtedly of thyroid origin. However, the pathogenesis of the affection is most obscure.

The symptoms of continued tachycardia must be distinguished from those of the paroxystical type. The symptoms belonging to continued tachycardia are two, namely, acceleration of the beats and a lowered blood pressure. The acceleration of the beats is certainly considerable, but never reaches the number occurring in the paroxystical form, the pulse averaging from 140 to 150 pulsations, with a maximum of 185.

While the intensity of the cardiac contractions produces vibrations of the thoracic walls in paroxystical tachycardia, in the continued form the apical shock remains perfectly perceptible and there is neither thoracic vibration nor thrill, the contractions maintaining their accustomed force. Moreover there is usually no cardiac murmur, the heart sounds remaining normal and with no change in their duration.

The other element in all cases of continued tachycardia is the lowered arterial tension, a distinctive symptom. The pulsations can hardly be felt, the pulse offering rather an indistinct undulation so that the cardiac contractions cannot be counted. Another distinctive feature is the absence of paroxysms, the affection being continued without variations once the maximum number of cardiac contractions has been attained.

The heart is often dilated and very marked venous pulsation is observed in the vervical region that may be mistaken for arterial upon a merely superficial examination. This dilation of the right heart rarely causes death and even after the tachycardia has lasted for some time no albumin can be detected in the urine. There is little stasis in the various viscera, little or no peripheral edema, and an absence of an hepatic pulse.

There may be fever present for some time. Other general disturbances are unequal pupils or myosis; occasional nausea or vomiting, and vasomotor disturbances, such as profuse sweating or high coloring of the skin, particularly of the face. The disease may culminate in asystolia, but this seems to be less common than a spontaneous recovery.

Rest is the first element in treatment. The most important cardiac indication is

to sustain the heart against fatigue and to prevent the advent of asystolia. Digitalis is the most important in this respect, but caffeine, sparteine, and ether have their indications. Quinine at the dose of one to one and a half grams daily has given good results and some writers have advocated ergotine.—N. Y. Medical Journal.

CORPUS LUTEUM EXTRACT IN REPEATED ABORTION

John Cooke Hirst (American Journal of Obstetrics, April, 1918) refers to a type of case—the "irritable uterus"—in which the uterus will stand distention up to a certain point, usually three or four months of pregnancy, then expels its contents. There is no apparent cause, such as uterine displacement, lacerations or erosions of the cervix, or pelvic adhesions, and the Wassermann is negative. In the case of a patient just beginning her seventh pregnancy, previously attended several times in abortion about the third month, the thought presented itself to the author that the cause of the miscarriages might have been a premature absorption or blighting of the corpus luteum of pregnancy, the relation of which to pregnancy is well known. Upon this basis, intramuscular injection of corpus luteum extracted was instituted, one mil of the extract, representing twenty milligrams of the dried substance, being administered once daily. Thirty-six injections were given in the course of two months. The patient had never before gone beyond the fourth month and one week of pregnancy, but this pregnancy resulted in a living child delivered at term. A second patient had had five miscarriages, never going beyond three and one-half months. In the sixth pregnancy corpus luteum was begun when she was seven weeks pregnant. She was also delivered at term. A third patient had a similar history and was successfully treated. Further experience by various observers will be required to establish definitely the value of the procedure. Intramuscular rather than oral use of the extract is recommended.

Surgery

AVOIDABLE TRAUMATIC ABDOMEN

Dr. John B. Deaver, of Philadelphia, said that the finding at operation of a pair of eight inch hemostatic forceps which had been left in the abdominal cavity at an operation done twenty years previously by an unknown operator, led him to think seriously of discussing the unnecessary trauma which such an oversight might cause, and, in this also to consider other avoidable abdominal injury, such as perforation and rupture of the uterus, which with proper instruction, technic, and judgment could also be avoided, at least in the vast majority of instances.

The warning note was particularly necessary today, when the wastage and the demands of warfare made it more than ever imperative to bend all efforts toward conserving life, preventing suffering, and unnecessary drain on the service of the sadly depleted staffs of the civilian hospitals.—New York Medical Journal.

PREOPERATIVE PURGATION

The recent communication by Peet, in The Journal, relating to the subject of catharsis before surgical operations, supplements the contentions of Alvarez of the Hooper Foundation for Medical Research that purgation as a routine preoperative procedure should be abolished. In his studies on the intestine,

Alvarez had noted that after vigorous catharsis the isolated musculature is no longer as responsive as normally to stimuli and is fatigued with greater readiness. The bowel as a whole may become unduly filled with gas and fluid, the circulation of the intestine somewhat impaired, and the peristalsis deviated from its usual manifestations. In this way it was believed that much of the gas distention, post-operative ileus, and perhaps the nausea and vomiting may be partially accounted for in patients who have undergone surgical operations.

Peet has accentuated the difficulty thus encountered by asking what is expected to be gained through the preparatory evacuation. We suspect that most surgeons would be compelled to answer this query either by a meaningless platitude or by a confession of ignorance. The evidence for a need of or advantage in the customary "emptying" of the bowel by laxatives is, indeed, not easy to find. Sterilization of the interior of the intestine is out of the question as a practical possibility, and there is little indication that anything seriously toxic is removed by such catharsis. On the other hand, it is not likely, in view of these studies, that this procedure, attended by fatigue, and often by loss of sleep, is a positive detriment to the patient and an actual cause of some of the familiar postoperative discomfort, if this mild term sufficiently designates the distress referred to. Peet significantly comments on the uneventful convalescence of patients after emergency operations for wihch no preliminary therapy was instituted.

A further item is worthy of consideration in this connection. Catharsis leads to loss of water and intestinal secretion. If this is not compensated there may be distress from this cause. Crile has lately remarked, in reference to postoperative feeding, that even at this stage of medical knowledge the supreme value of water is not fully appreciated and its administration is often neglected or mismanaged. How much more serious is this incrimination when preoperative losses are freely induced by purgation. At most, therefore, Peet recommends simple enemas as a means of emptying the bowel before operation. If his contention is correct that, where the more drastic habitual procedure is abandoned, postoperative thirst, nausea and vomiting, abdominal distress and gas pains occur much less frequently, the appeal to abolish something sanctioned by custom deserves to be heeded.—

TREATMENT OF BURNS

A paper by Dr. Walter Estelle Lee and Dr. William F. Furness was read, on the treatment of burns by exposure to the air and the application of dichloramine-T through paraffined mosquito netting. Doctor Lee said that Stewart's definition of an ideal dressing for severe burns was one "that would be 1, asceptic or 2, mildly antiseptic: 3, that would provide free drainage; 4, that would not macerate or 5, stick to the tissues and 6, would not necessitate frequent changing." Still another might be added, that 7, it should minimize the abnormal radiation of body heat from surfaces devoid of the protection of the skin and subcutaneous tissues. We did not have at the present time any one method of treatment of burns in which all these conditions were attained. Ambrine and the many forms of paraffin films now used did meet some of the necessary conditions. The recent interest in paraffin film treatment had for the time being induced many surgeons to abandon a method wihch for some time had given excellent results (the exposure of the burned surfaces to the air).

The open air treatment of burns more nearly met the theoretical requirements of an ideal dressing than any other that had been proposed. The following modification of the open air treatment of burns was suggested: the covering of the entire burned area and a generous portion of the surrounding skin with a single layer of mosquito netting previously impregnated with paraffin wax. The paraffin netting might be held in place by single layers of a circular turn of gauze bandage or by adhesive strips applied over the netting and the uninjured skin (never over the burned area). Such a dressing was aseptic, and the large open meshes provided perfect drainage for the wound secretions to the outer surface of the netting. When this scab formation on the outer surface of the netting interfered in the slightest way with the drainage of the wound secretions, it was completely and painlessly removed by lifting the nonsticking paraffin net from the surface of the wound, usually once in twenty-four hours. The paraffined netting rarely adhered to the wound surface and then a generous spraying with sterile paraffin oil always loosened it. The only remaining condition to be met in order to have the air treatment fulfil all the requirements of the ideal dressing was the use of an antiseptic. A one or two per cent solution of dichloramine-T dissolved in chlorinated paraffin wax (after the method of preparation proposed by Dakin and Dunham) could be used on burned surfaces without causing any objectionable subjective or objective irritative phenomena. This oil solution could be readily applied in the form of a spray (at the room temperature no heating was required as with the paraffin films) to the entire burned surface, before the paraffin net dressing was applied, and subsequently, through the meshes of the net on to the surface of the wound, if for any of the above mentioned reasons, it was unnecessary to remove the dressing each day. Doctor Lee and Doctor Furness had employed this modified air treatment of burns upon eighty-six cases of burns at the Pennsylvania and Germantown Hospitals during the last seventeen months. With it, the doctors felt that because of the surprisingly small degree of infection occurring in these wounds, they had healed more promptly and with more satisfactory scare than with any other method heretofore used.—New York Medical Journal.

EFFECT OF DICHLORAMIN-T ON PERITONEUM

On the surgical service of the Lankenau Hospital, observations have led to the conclusion that very definite harm can be done by this method of treatment, and that, contrary to published opinions, skin irritation takes place, despite careful adherence to the principles of fresh undecomposed solutions, minimum dressings, avoidance of alcohol, water, and other substances likely to decompose the solution. Blood and exudate form a solid coagulum in the meshes of the gauze and interfere with drainage. The effect of solutions of 7.5 per cent and 20 per cent dichloramin-T chlorinated eucalyptol on the healthy peritoneum of dogs was investigated. The same strength solutions were used on infected peritoneum to determine if infection would be inhibited or destroyed. Observations from the surgical service on the effect of the 20 per cent oil in the treatment of abscess cavities in the peritoneum shows that the solution causes clotting of blood and exudate on gauze, and drains, and leads to interference with drainage and trauma. In the peritoneum of dogs, it causes a vio-

lent irritation with hemorrhagico fibrinous exudation. The same results in the peritoneum of dogs are produced by the 7.5 per cent in a certain percentage of cases. Both the 7.5 per cent and the 20 per cent solutions are distinctly harmful to the peritoneum; the benefits are none.—Exchange.

CRANIAL BONE PLATES IN CRANIOPLASTY

Sicard, Dambrin, and H. Roger (Bulletin de l'Academie de medicine, April 30, 1918) have been resorting successfully to this procedure for two years, and have now operated in eighty-five cases without mortality, with perfect tolerance of the bone plate, and with excellent esthetic and protective results. The plate is obtained from a human cadaver at autopsy and is taken from the corresponding region of the skull. It is properly shaped, thinned down, then freed of fat and sterilized. The few persistent local sinuses and complications necessitating removal of the plate in three or four of the earlier cases were entirely obviated by strict technic in the latter portion of the series. Of the other methods hitherto used, metallic plates are open to the objection of ultimately inducing local irritation. Cartilage and osteoperiosteal plates sometimes give way and become absorbed, even to the point of reappearance of the cerebral pulsations. Cartilage plates placed in blood or blood serum for a few hours show marked changes in curvature. Bone plates, on the other hand, promote subjacent osteogenesis, or rather, fibrogenesis. While they are similarly susceptible to absorption, there remain locally very firm fibrous or osteofibrous residua which continue to serve the purpose of the plate.

THE TREATMENT OF EMPYEMA

—By frequent aspiration and the injection of solution of formaldehyd and glycerine—S. M. Rinehart, M. D., Pittsburgh, Major, M. R. C., U. S. Army; Division Tuberculosis Specialist and Anton W. Oelgoetz, M. M., Columbus, O., First Lieutenant, M. R. C., U. S. Army, Camp Sherman, Chillicothe, O.

The treatment of empyema is that of pus anywhere—drainage. But the manner in which drainage shall be secured is a matter of vital importance, especially in the army, where it is necessary to get men back to their organizations at the earliest possible date. Any method of treatment that cuts short convalescence will be of tremendous value to the government. It will result in a great saving of money and man-power, and these are the factors that will win the war.

Thoracotomy and costectomy are the methods most frequently employed. In some virulent cases in which rapid drainage is necessary, costectomy is the only method for consideration. This always leads to contraction and collapse of the lung to a greater or less degree. During the convalescence these men are held in convalescent wards, where, at least in this camp, they are put through a series of graduated exercises and thus brought back to normal. Thus weeks and sometimes months pass before the men can be sent back to duty. Of course, there will be a period of convalescence no matter which method of treatment is used but we believe that this period can be materially shortened.

Our method is not new, being simply plain aspiration with one or two variations.

Under the direction of Major S. M. Rinehart, tuberculosis specialist at Camp Sherman, we undertook a series of cases

in which aspiration was done, followed by the injection of 2 per cent formaldehyd solution in glycerin. Aspiration was done every other day, if there were physical signs of fluid, and that is the point we wish to emphasize. We do not wait for the temperature and pulse to go up, indicating sepsis. When once the diagnosis is made, aspiration is done as rapidly and as frequently as the pus accumulates, and we would not hesitate to do this every day, although every other day seems sufficient. The idea is simply to keep the chest cavity free from pus as nearly as possible, to remove it as rapidly as it accumulates and to inject 2 per cent solution of formaldehyd in glycerin as advocated by Murphy. A large caliber needle is used, and the operation is done under local ethyl chlorid anesthesia. No harmful effects result from the repeated aspirations, and the patients complain very little of pain, much preferring aspiration to the discomfort of allowing the pus to remain and its resultant absorption.

By this method, men get well far more quickly than by thoracotomy or costectomy, and there being no collapse of the lung, the resulting convalescence is greatly cut short. There is no resulting deformity of the chest; and the formation of localizing adhesions about the drainage tube, thus forming walled-off pockets of pus and requiring secondary operation, never happens. It is a method which we think should always be employed first, since it will prove sufficient in the majority of cases, can do no harm, and offers no contraindication to costatectomy, which can be done later if indicated.

Records of two typical cases are given, showing dates and number of times aspiration was performed, with bacterial estimation done on each specimen of pus obtained. These cases are interesting in that they show how rapidly the bacterial count and the total amount of pus increased as long as aspiration was done at long intervals, and also how rapidly both dropped when aspiration was done whenever the physical signs indicated pus, however small the amount. Up to May 15, aspiration was done about once a month. From that time on it was done as rapidly as the pus accumulated, and the rapid drop in the bacterial count would seem to indicate that this is a valuable scientific and rational addition to our armamentarium.

General Analgesia by Oral Administration.—James T. Gwathmey and Howard T. Karsner (*Journal A. M. A.*, April 6, 1918) present a preliminary report upon a series of animal experiments to determine the feasibility of producing general analgesia by the oral administration of various narcotic drugs. As a result of these experiments the following mixture was tried on man with extremely favorable results:

Ether, ...16.0 (dr. iv);
Liquid petrolatum, ...16.0 (dr. iv);
Peppermint water, ...0.3 (min. v).

This dose could be taken with ease, and very little bad taste if sandwiched between mounthfuls of port wine. It produced a marked degree of general analgesia, sufficient to permit otherwise painful dressings being accompliched without discomfort. Combined with a few whiffs of chloroform, short operations could also be performed without pain and as the formation was improved now used is: Choroform, from two to four mils (half to one drachm), and fourteen mils (dr. iiiss) each of ether and liquid petrolatum. The solution produces no ill after effects, and is quite without danger, as it does not produce anesthesia. The vaporization of the

ether has been shown to be slow and uniform from oily solution, hence the action of the mixture is even and continued.

EVOLUTION IN CONSRUCTION OF PROSTHESES

It is interesting to note the evolution that has taken place since the beginning of the war in the construction of these appliances for the mutilated. At first, the complicated prostheses, fragile and cumbersome, were considered to be veritable prodigies of ingenuity. Now these complicated appliances have been discarded by the great institutions in France for vocational rehabilitation of the wounded, as well as by the industrial establishments which employ these mutilated. The principal held in view is that the patient should rely mainly on what physical aptitude he has left, and when he has to use an orthopedic appliance, it should be a simple apparatus, solid, not expensive, one which can be replaced or repaired easily. At first the aim was to construct a sort of universal claw *(pince universelle)* in case of mutilation of the upper extremity so as to have an apparatus that will be useful generally and supply all needs. Among the more ingenious apparatus of this kind are the claw of Dr. Amar, the claw of Louis Lumiere, and the claw d'Estor. All these appliances are of value. They enable the wearer, with experience and training, to do certain kinds of work with some skill, as, for instance, the work of a joiner or a fitter. On the other hand, these appliances are not suited for the agriculturist. It must be remembered, however, that it is impossible to create an apparatus that is suitable for all occupations. In each trade it is necessary to supply the mutilated with a carrying tool or claws of various forms adapted to the different needs.

WORKING "HANDS"

This has led to the designing of artificial working hands, *mains de travail.* There is the hand of the gardener ; the hand of the wine grower ; the hand of the laborer, and the hand of the digger ; the hand of the joiner, the chair caner, the jeweler, the printer, the letter carrier, and even the mechanician. These artificial working hands do not conform to the shape of the anatomic hand. The mechanism is extremely simple, often rudimentary, not expensive, but adapted to the complementary movements that the patient needs. The object is not to restore the anatomic shape, but to restore function. How were the *mains de travail* created? The thing is very simple. When the mutilation involves the right arm, the man should first be taught to become left handed, that is to say, he should learn to use his left hand just as well as he formerly used his right. This once accomplished, it follows that after loss of one arm, either the right or the left, there is need to supply only the missing arm or hand. Consequently, one need only create a complementary left member, a simple auxiliary of a healthy right arm. It is sufficient, to meet the exigencies of any trade, to specify the functions of the left hand during the course of working, and to seek artificial means to supply that left hand. For this it was necessary to study at first on normal, non-mutilated workers the movements, attitudes and different positions of the left hand in each trade. By dissecting thus,as it were, carefully the various phases of the work of the left hand it was possible to trace, step by step all the things, that the left hand had to do in the practice of the trade. It was found, strange to say, that the movements of the left hand, in general, are

very simple, not numerous, acting only along a single axis and often in a constant direction. It was this method of dissociation of the movements that has enabled Dr. Bourdeau to supply a left hand for many trades with the aid of one or two simple devices. He has thus created a whole series of *mains de travail* which are very ingenious and which render excellent service, notably for the readaptation of the multilated for agricultural work.

—*Abrt. Cor. J. A. M. A.*

PSYCHIC EFFECTS IN SURGERY

Much has been heard about needless surgery, and when a body of eminent surgeons deem it necessary for the protection of the reputation of their own branch of practice to sign an agreement not to perform unnecessary operations, the accusation from without would seem to receive full confirmation.

But there is little doubt that, as in the giving of drugs, the use of the knife often produces good effects from a purely psychic influence. The effect of an operation, especially of the preparations for an operation, upon the patient is profound, and were there not hope and expectation of improvement back of it all, the bodily results of mental states would often prove disastrous. Improvement is expected, and improvement usually takes place, therefore, no matter what emotional disturbance is undergone.

Operations are of such common occurrence and so much discussed that by a certain class of persons, women especially, they come to be desired as a curative means, and even when not needed for mechanical abnormalities or for the removal of foci of disease, their performance produces good results. The patient, with a few exceptions, is satisfied with the experience, and above all feels (even if the symptoms are not removed) that everything possible has been done. It must be a hard-hearted surgeon who would refuse to operate in such a case, especially if the fee were at all adequate; and since the risk is slight, he is certainly not more culpable than the physician who doses his patient, to the injury of the digestive apparatus, with drugs whose effects are likewise psychic. How to twist the mentality into healthy channels without the use either of the drug or the knife, especially if a friend of the victim has recovered through such treatment, is not an easy proposition—certainly far less simple than the use of material means as an aid to the cure.

The experiment of giving bread pills to patients in one medical ward of a hospital, and regulation drugs to those in another, has been tried and the results are familiar to the reader. A comparison of the effects of a scratch through the skin and a few superficial stitches and some more complicated procedures in selected cases (for which experiment there would be many cases to select from) might prove equally instructive. —Editorial New York Medical Journal, August 31, 1918.

CALLING IN A SPECIALIST

While many patients, especially women, take pleasure in telling how many specialists they have seen, concluding from this their case was particularly bad or interesting, there are many who are annoyed and bewildered by being sent from one doctor to another. They see the inevitability or necessity for many men to make only one part of their autos or their shoes, but still think the doctor should understand the interdependence of every part of their bodies and be able, by himself, to give

medical or surgical aid comprehending all. Admitting that the "family doctor" does well to call the pathologist, rontgenologist, bacteriologist, stomatologist, alienist, ophthalmologist, and what is known as a "nose and throat man" to assist in diagnosis, there are many small towns where this plan is abused. For instance, many doctors often have their offices in one building, and the desire to do a good turn to a colleague in return for referring a patient causes them to send cases from one office to another, though knowing that only an opinion will be gained rather than an elucidation, for the "specialists" do not deserve the title, being only "good on eye work" or "first rate on stomachs;" that is, they have had a little more experience than the referring doctor, but certainly not enough to merit an extra ten dollars being added to the account for their services. While some patients are gratified by these additional opinions, in the long run this practice will lead to distrust of that old friend the "general practitioner," and he will have to take a new name—"omnispecialist," which will help to sustain his reputation, the therapeutic value of a long or little understood word being universally acknowledged.—Editorial, New York Medical Journal, August 31, 1918.

THE ANTISEPTIC TREATMENT OF WOUNDS IN CIVIL PRACTICE

It is not possible for surgery to pass through the hitherto unparalleled experiences of this war without having left upon itself an indelible impression. Probably no other phase will be so profoundly affected as that of the control of infection. Naturally one thinks immediately of the new principles involved in the Carrel-Dakin technic. One begins to wonder how civil practice will be affected.

A beginning is seen in the communication of Hartwell.* Cases were treated according to the orthodox method at Bellevue Hospital. Similarly to the military wounds these could be classified as those within the first six to ten hours—contaminated cases; cases after this interval designated as infected cases; cases after twenty-four hours—in the stage of established suppuration.

In summarizing the opinion is expressed that the experience has demonstrated the practicability and advantage of the Carrel-Dakin method in civil hospitals. "In those civil hospitals where a traumatic service is not an important part of the hospital work, it is doubtful whether the inauguration of this treatment will meet with great success, for the reason that the call for its use will not be frequent enough to make it an established routine. Without this, it probably would be no more effectively applied than is any other special form of treatment which is only occasionally demanded in a general hospital service, and if ineffectively applied it cannot be expected that satisfactory results will follow."—A. O. W. *Annals of Surgery, April, 1918.

Book Reviews

Practice of Pediatrics. By Charles G. Kerley, Professor of Diseases of Children in the New York Polyclinic Medical School and Hospital. Second edition. Cloth. Price $6.50 net. 913 pages with 136 illustrations. Philadelphia: W. B. Saunders Company. 1918.

This text book has, according to the author's prefatory announcement, 25 new articles added, sixteen chapters rewritten besides numerous other changes in a smaller way. Among the many ad-

vantages of the book, serving to add greatly to the attractiveness of the volume are the numerous enlightening illustrative cases detailed at length. In fact the book as a whole is well made up, contains a vast amount of material, making it a valuable work for reference by the busy practitioner . We note that the intraspinal use of serum in the treatment of poliomyelitis is mentioned in a rather cursory manner, and that he makes no mention of the now fashionable serum treatment of pneumonia. Whilst many of us may not agree fully with some of the author's methods of treatment, the book as a whole may be relied upon as an authoritative source of information upon the subject which it treats.

1917 Collected. Papers of the Mayo Clinic, Rochester, Minn. Octavo of 866 Pages, 331 Illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $6.50.

This volume of the 'Clinics' is one of the books which may be "taken up with delight and put down with satisfaction." Not a dull paper in the lot. The illustrations are clear and clean cut plainly showing for the most part what they are intended to show. Some of the articles are preceded by observations on the technique of the operations or treatment which are very instructive indeed. A voluminous bibliography on surgery of the spleen adds much to the value of the article to those who may care to go deeply into the subject. A book that should be in the hands of every practitioner who may wish to be well informed upon the subject considered.

Interpretation of Dental and Maxillary Roentgenograms. By Robert H. Ivy, M. D., D. D. S. Major, Medical Reserve Corps, United States Army. Associate Surgeon, Columbia Hospital, Milwaukee; Formerly Instructor in Oral Surgery, University of Pennsylvania. With 259 illustrations. Price $2.50. St. Louis, C. V. Mosby Company. 1918.

This is a very properly called Medico-dental work on pathology and surgery of dental lesions based upon actual findings in a great number of observed and carefully studied cases. Both normal and diseased conditions found to exist being fully set forth make it a work of especial value to the dental surgeon. The illustrations are numerous and well executed, fully illustrating the subject matter.

Oral Sepsis In Its Relationship to Systemic Disease. By Wm. M. Duke, M. D. Ph. B., Kansas City, Mo. Professor of Experimental Medicine in the University of Kansas School of Medicine. Professor in the Department of Medicine in the Western Dental College. Visiting Physician to Christian Church Hospital; Consulting Physician to Kansas City General Hospital, Kansas City, Mo., and to St. Margaret's Hospital, Kansas City, Kan. Price $2.50.

This little book is written upon a very interesting subject of great importance to practitioners of both Dentistry and Medicine. The author has as clearly as possible within the limits of our knowledge set out the relationship which is often found to exist between gum and alveolar diseases, and certain systemic diseases of rather occult etiology. An extensive bibliography is appended so the reader can readily and intelligently pursue the subject in an exhaustive manner should he so desire.

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THE FEEBLE-MINDED WITH SPECIAL REFERENCE TO JUVENILE DELINQUENCY AND VENEREAL DISEASES.

Read at Regional Red Cross Home Service Conference, Morgantown, W. Va., July 19-21, 1918.

By L. V. Guthrie, M. D.,
Superintendent Huntington State Hospital — Medical Examiner Cabell County Lunacy Commission, Etc.

Mr. Chairman, Ladies and Gentlemen:

So far as we know the mental defective has existed since the creation of man. No age in the history of the world, no climate, no nationality has been exempt. For many centuries it was the custom to permit these defectives to perish, and, by some races this class was deliberately murdered. This particular method of dealing with nature's step-children is quite in contrast with our present-day methods and accounts to some extent for the increase of this unfortunate class. Instead of shortening their lives, as in earlier times, our constant effort is to promote their welfare and lengthen their days.

Until recently the mental defective in West Virginia was cared for exclusively, when a public charge, in the various county infirmaries of the State, with the exception of a few who had been improperly and illegally committed to the hospitals for the insane.

The West Virginia Legislature of 1897 founded the Asylum for Incurables at Huntington, and directed that the idiot and imbecile should be admitted to that Institution, but such a large class of other incurables and persons suffering with chronic diseases were made eligible that it was found impracticable, at that time, to proceed with the Institution as originally intended. The founding of this Institution was the first organized effort made on behalf of the feeble-minded in West Virginia and it is now known as the Huntington State Hospital.

The term "feeble-minded" is by many

persons used so loosely and indefinitely that a few definitions should contribute to a more specific understanding.

By mental deficiency we understand a condition usually arising from congenital defects, the result of arrested cerebral development and not necessarily the result of a pathological condition. This general condition is divided into—

First—Idiocy, the lowest form of human existence. The idiot is without understanding from birth, is helpless and must be cared for as an infant, and his mental development, without regard to his chronological age, may be compared with a normal child up to two years of age.

Second—The Imbecile on the other hand is able to understand many matters and, while unable to care for himself if left alone in the world of complex reactions and surroundings, is capable of doing much under the direction of others. The imbecile covers a large range in classification and he has much greater possibility of development than the idiot. Without regard to his age he may well be compared in mental capacity to the normal child of two to seven years. The word "Imbecile" should be construed to apply to the mental development or lack of mental development in the individual. It has no reference to his or her physical infirmities.

Third—The Moron or Feeble-minded, or High Grade Imbecile is capable of great improvement by educational methods and may, under favorable conditions, become self-supporting. These individuals at maturity may be compared in their mental capacity to the normal child of from eight to twelve years of age. It is among this class that many criminals and prostitutes are found. The moral stamina is frequently NIL and the individual may be a menace to society. The word "defective" as applied to individuals in this class has no reference to their physical condition, for frequently they are perfect in physique.

This third class is less understood by the laity than the idiot and imbecile, and it has only been in the last few years that those slightly defective have been seriously considered. Even now the general public has little interest in or comprehension of this serious blight. Each of these three great classes or degrees of mental deficiency is capable of sub-division into low, middle and high grades, and again into combinations as idio-imbecilic, ect. All of the above conditions, meaning mental deficiency, arise from congenital defects or from conditions beginning with life, or at the period in the individual's existence when the intellectual faculties should be expected to become manifest, and should not be confused with mental impairment occuring later in life. In the former condition known as idiocy, imbecility, feeble-mindedness or the moron, the individual has not been robbed of mentality that he at one time possessed. These individuals have from the beginning been in mental want, never were normal and never can be, while in the mental impairment occuring in later life the individual has lost something that he did at one time possess.

After reviewing more than 8,000 applications for the admission of patients to the Huntington State Hospital I am impressed with the frequency that County Officials, and I am sorry to relate, physicians as well, in preparing their commitment papers, use the term "feeble-minded," etc., as synonymous with "dementia." Proper nomenclature draws a well-defined difference between these terms, and with Weston and

Spencer State Hospitals receiving the insane and the Huntington State Hospital the mental defectives, there should be a better understanding of these abnormal conditions.

Dementia is a form of insanity characterized by loss, or serious impairment, of intellect, will and memory. To illustrate: Dementia Praecox occuring from or about puberty to about thirty years of age, occasionally curable. Chronic Dementia, incurable. Paralytic Dementia or Paresis, incurable. Persons suffering from Senile Dementia, Tabetic Dementia, Terminal Dementia, Toxic Dementia, etc., should, under the ruling of the State Board of Control as authorized by the Legislature, be sent, when in need of institution care, to Weston or Spencer. As before stated, the feeble-minded class should be cared for at the Huntington State Hospital.

The first and second classes, the idiot and imbecile, are easily recognized and may be properly cared for. The profound mental impairment is by comparison with the moron an advantage to society. He, the idiot cannot plan offenses against his neighbors and in the advanced stage of idiocy he is not apt to procreate. How different is this with the more developed mental faculties of the moron whose morals are usually warped! He may plan and execute, he may travel the land by day and night, propogating his kind and doing acts of violence.

It has been forcibly stated that "Every Moron is a potential criminal, as he lacks the understanding of right and wrong and has not the power of self control. and the individual as an adult who is deficient in these essential factors to moral life will or will not become a criminal dependent upon temperament and environment."

The Feeble-minded unless assisted by family or friends tends to become a pauper. However, this is not from choice, but because they have not the ability to improve their condition, and I imagine that under conditions of life less complex these people would have been at much better advantage by comparison with the normal person than today when our Twentieth Century ideas and usages are so complicated.

The Moron furnishes a type of mentality which is truly perplexing. It has been estimated that from 25 to 50 per cent of the population of the various penitentiaries belong to this class, and the majority of prostitutes, thieves, ne'er do wells and many juvenile delinquents belong to the same class. In a New Jersey Juvenile Court one hun hundred offenders were given mental tests and only one of the entire hundred showed normal mental development. We must remember, however, that "boys will be boys" and it is not infrequent that these juvenile delinquents are carrrying out certain saverage instincts, which seem to be latent in many children during their early teeens. The youthful offender should not be hardshly condemned till his family history and environment have been examined and determined.

While we have some defense to make for the juvenile delinquent there is little to be said in defense of the prostitute, except that as a class the majority of them are feeble-minded. The mental defective is as a class as productive of prostitutes as a fertile tract of uncultivated land is of weeds, and like the weeds of the field they are of no benefit or profit to any one in the universe. Lazy, debased, immoral, carriers of syphilis and gonorrhea, shunned by all respectable people of all nations, they are at all times a disgrace to the human race and in time of war are a positive

menace. The Western Social Hygiene Association informs us that through American prostitutes, directly or indirectly, 445,000 registered men not called in the first draft have been infected with syphilis alone, and of this number 5,800 are West Virginians. The Social Hygiene Vol. 3, No. 2. page 205, says:

"During the first eighteen months of war one of the great powers had more men incapacitated for service by venereal diseases contracted in the mobilization camps than in all the fighting on the front."

Unfortunately this is not the most serious part, for when the war is long past and the soldier returns to civil life, innocent women will suffer and the disease will be transmitted to children who in their turn will live out a miserable existence.

Statistics show that in one year the deaths from smallpox in the entire United States were 134 persons. Our health authorities quarantine this disease and take all precaution to protect the general public, while in New York alone during the same year 590 people died from the result of softening of the brain depending upon a previous infection of syphilis, and the prostitute was the common carrier.

The Financial Burden

Throughout the civilized world there has been for many years a steady increase in the ratio of feeble-minded as well as insane to the normal population and the cost for their care has mounted to billions of dollars. The United States alone spends annually more than sixty millions in the care of the mental defective, insane, epileptic, etc.

During the past year West Virginia has spent approximately $400,000 at Weston, Spencer and Huntington. To this should be added a portion of the total annual appropriations of $167,000 for the Industrial Home for Boys, Industrial Home for Girls and the School for Deaf and Blind. This is not all the burden placed upon our commonwealth by this blight, as each County in the State has its imbeciles, paupers and others.

Society's Duty and Responsibility

In caring for the profound idiot and low grade imbecile, who are among us, the matter is largely a financial problem, which should be humanely, wisely and economically handled.

The adult idiot whose maximum mental development will not exceed, by comparison, that of a normal child of two years or younger, and the individual who will never develop his mental faculties beyond that attained by a normal child ranging from three to seven years and known as the imbecile, do not constitute the same danger and perplexities as does the adult individual with a mind of a child of twelve years.

As a matter of convenience we will divide the defectives into two classes: First, the born who are now living among us, and Second, the unborn who are yet to come.

For the first class a well organized State Institution or Colony is most ideal. Here they may be educated in proportion to their capacity to learn. All can be improved, except the most profound idiot.

Success in teaching this class depends upon patience, the application of stimulus forcibly applied and at frequent intervals.

The diversional occupations as found in manual training, the farm, garden and work shop should be their best friends, and in addition to this such book-learning as the capability of each will warrant; the object being to arouse and quicken their blunted faculties and to make them as self-sustaining as possible.

By colony management and segregation there will be little opportunity for propagating their kind.

A part of our great financial resources used for this purpose would prove a splendid investment.

For Society's protection from the defectives who are not yet among us, it is only necessary to refer to the principal cause of this condition, namely, heredity. The wise man should inquire into the mental condition of his proposed wife, and also into the mentality not only of the parents but also the grandparents, with due regard and allowance for accidental cases of abnormalities. This, of course, applies with equal force to the woman who is about to take upon herself a husband.

It has been conclusively shown that when both parents are feeble-minded, all of the children are feeble-minded, that the progeny of the slightly feeble-minded mother nearly doubles the average number of offspring of the normal mother, and that multiple births occur ten times as often as among normal women. Reappearing from one generation to another with the regularity of fate, often doubling and trebling itself—this blasting degeneracy should be suggestive of a rational treatment.

Suggestions

I do not recommend the method of extinction for the unfit who are among us, as practiced by the older nations and which is often a law of nature in the brute creation, but, the adoption of methods of prevention and the return to a simpler life with fewer complexities. With this elimination of harmful influences we should have such selection in mating as will insure only the survival of the fittest.

First—More stringent marriage laws and the enforcement thereof, would be a step in the right direction, but there is much less to be hoped for by this method than theorists would imagine. It is a well known fact that a very large number of defectives are born each year out of wedlock and this number would probably be increased with eugenic marriage laws.

Second—The only perfect protection society has against the transmission of hereditary mental defectiveness is that which the surgeon gives. Fortunately this is also remedial and tends to the future health, comfort and happiness of the defective. Asexualization also adds greatly to his liberty when confined in an institution by lessening the perpetual surveillance, and if at large, may save him from mob vengeance or save her from the agonizing suffering of child-birth and other woes. Legalized sterlization, wisely applied in selected cases, will prove to be a blessing to all parties concerned.

Third—The establishment of a Lunacy Commission with broad duties of educating the public, inspecting hospitals for the insane, county infirmaries, etc., and a general supervision of all matters pertaining to imbecility, insanity and kindred conditions. The responsibility of meeting ths subject face to face will necessarily be placed upon the educated and enlightened people of the State. If it is left for the feeble-minded to work out we may rest assured that it will end disastrously.

Fourth—There should be more co-operation among those interested in the upbuilding of the human race. The press, the teacher, the clergyman and the physician should assist in disseminating greater knolwedge concerning the damaging effects of bad heredity, syphilis, unwise mating and immoderate use of alcohol.

Fifth—The dissemination of this knowledge should be undertaken with

candor and boldness. These insidious dangers to society are altogether too great to paliate or excuse the slightest hesitation or timidity on the part of those who possess the light of a better understanding.

CAESAREAN SECTION

Five years' experience with Caesarean Section.

Read at Fiftieth Annual Meeting W. Va. Medical Association, Fairmont, Oct. 1917.

By George W. Dobbin, M. D.
Baltimore, Md.

With the marked advance in the surgical sciences it is very easy to see how Caesarean section should have increased in popularity and frequency. The operation offers such a simple and easy method of overcoming difficult problems in the management of many conditions that may confront the obstetrician; he feels that by opening the abdomen and taking the child out in that manner by a clean and well ordered operative procedure he is doing more for his patient than if the case be conducted by way of the vaginal route with its injuries, difficulties and dangers.

The simplicity of the operation has undoubtedly led to its abuse in the last few years, and I have no doubt that many cases have been operated upon by surgeons, which could have been delivered by the pelvic route had they had the advantage of more mature obstetric judgment.

If we concede the point that delivery by abdominal section is without its mortality, then why any other method of procedure if there is any doubt whatsoever as to our ability to conduct the case through natural channels? We cannot, however, in any sense of the word concede this point, and one of the chief objects I have in bringing this subject before you today is to emphasize the fact that Caesarean section, although under certain conditions an almost ideal procedure, yet presents so many difficulties, complications and dangers that its performance should never be permitted save in the presence of very definite indications, under most suitable surroundings and by one who is not only trained in surgical technique but also thoroughly versed in solving the mechanical problems presented by the passage of the child through the birth canal.

In a recent article entitled the Abuse of Caesarean Section, Williams emphasizes these points most thoroughly, and although I believe that for the most part he errs on the side of conversatism, yet his warning of the dangers of untimely and indiscriminate operating is most opportune.

I believe that the experience of the last five years is going to put us in possession of a fairly definite set of indications as to when the operation should and should not be done. I make this statement with the full understanding that it may probably increase the frequency, but even if this be the case and the operators properly choose their cases, I can see no reason why this increase in frequency is not justifiable. If on the other hand it has the effect of encouraging the semi-trained obstetrician to operate whenever he doubts his ability to bring about a normal termination of labor, through natural channels, God help the poor women that fall into his hands.

Let us see for a moment if we can formulate certain conditions under which the operation can be done with comparative safety, and then on the other

hand conditions which if present render its performance frught with the greatest danger.

Caesarean section as a purely elective procedure is an operation that should not have a maternal mortality of more than 2 or 3 per cent. The phrase "elective procedure" refers to the condition of the patient, that is she must not yet have gone into labor, or at least be just at its beginning, she must not have been subjected to vaginal examination or attempts at pelvic delivery, her physical condition must be good as a surgical risk, and the surroundings must be of the best, a well-regulated hospital with the usual corps of trained assistants, for although the operation per se is a simple one it is not a procedure to be undertaken when the conditions are not of the best. Under such conditions, I have seen a number of cases in which the convalescence has been a little more uncomfortable than the puerperium after a difficult pelvic labor accompanied by more or less laceration of the soft parts.

On the other hand if just the opposite state of affairs is present, that is if the mother has been for sime hours in labor, has had repeated vaginal examination or possible attempts at delivery by attendants whose technique is not beyond reproach, is the subject of intercurrent disease, and is therefore a bad surgical risk (and under this heading I consider eclamptics), and is not in good surroundings, the operation is one presenting so high a mortality that almost any other procedure should be chosen as preferable. About twenty years ago this point was brought out by Reynolds of Boston, who showed an almost negligible mortality in the selected class and a frightful one in the unfavorable class.

One can thus summarize that from a purely operative standpoint if the conditions and surroundings of the patient are favorable the operation is about as safe as any simple abdominal procedure, but if the conditions are not of that character the procedure is so serious as to be unjustifiable, unless abdominal section offers the only means of delivering the child.

I have thus far spoken only of the surgical indication and said nothing concerning the obstetrical conditions for which the operation is done. The neglect of these indications to which I referred at the beginning of this paper, is the chief objection to the recent popularization of Caesarean section, for it would tend to make the obstetrician disregard their importance and operate in many instances where the patient could be delivered much more safely through the pelvis. Any fairly well-trained surgeon can do a Caesarean section successfully; it is the thoroughly trained obstetrician, however, that delivers most of his cases through the natural channels. In the past the only permissible indication for Caesarean section was some mechanical obstruction in the birth canal offered either by deformities of the pelvis or tumors of the generative tract. Of late years, however, the indications have been much broader and we now consider that eclampsia, placenta praevia, cardiac and other general diseases may present definite indications for delivery by the abdominal route.

During the past five years there have been done by me or by the physicians associated with me at the Mercy, Woman's or Hebrew Hospital of Baltimore, forty-two Caesarean sections, thirty-eight by the abdominal and four by the vaginal route. In this series there were five maternal deaths, a large mortality, it is true, but I think I shall be able to show that only one of these was directly attributable to the operation.

The conditions that were considered as

indications for the operation were in the first place deformities of the pelvis. Here there were fifteen cases with no deaths. This clean record is due to several causes. All the patients were in the free service of the Mercy Hospital, hence there was never any interference or suggestions on the part of the family. Most of the patients were deformed negro women, and the diagnosis of pelvic deformity was not a difficult matter. A definite rule at the Mercy Hospital is that of any patient upon whom the operation is thought likely no vaginal examination whatsoever is made by the resident. One of the visiting men is immediately notified and the decision of the operation and the operation itself left entirely to him, thus practically all of these cases were clean ones and in this series there have been some recoveries that were extremely simple, the women being a little more uncomfortable than after a normal confinement. This is as I have already stated a point of greatest importance for the severity of convalescence varies directly with the number of hours the woman has been in labor and the amount of antepartum interference she has had.

Closely associated with this series of cases where the indication was entirely pelvic, is a series of five cases where the operation was done for large child. In these women the pelvic measurements were normal but the size of the child and its behavior in coming down into the pelvis was taken as a reason for the operation. All of these cases were private patients and the importance of delivering a living child was a very strong point in deciding upon the operation. It is highly probable that had they been in the free service Caesarean section would not have been done but delivery accomplished either by a destructive operation or a persistence in the forceps which heretofore had failed.

As all of these patients (save one, a case of eclampsia with enormous child which later proved to be the subject of a marked general oedema) had had the test of several hours in the second stage of labor, they were therefore not in any sense of the word in the favorable class and their treatment by Caesarean section may be open to some criticism. It is these border-line cases that tax the judgment of the obstetrician to the highest degree, and it is extremely difficult, if not impossible, to lay down any fixed set of rules. I think that the desire for a living child on the part of the parents is a very strong factor in making the obstetrician decide, for until the patient has had the test of labor and it is seen that things are not going as they should, he does not think of the possibility of a section and thus she rapidly gets into the unfavorable class. It must not be forgotten, however, that a difficult forceps or an attempt at forceps followed by version may result in such serious injury to mother and child that both may be lost. Only within the year I have had charge of a case throughout her entire pregnancy and labor and her delivery with high forceps was so difficult that she died an hour later from shock. This illustrates the difficulty of making a decision in some instances, for this woman had been subjected to the most thorough antepartum examination, was in a well-regulated hospital from the onset of labor, and the plan of treatment was in my judgment the best that she could have gotten, yet she died as the result. Far better here, I say, would have been a Caesarean section even though it entailed a more prolonged convalescence, or even if the patient had died a week or so later and not practically on the table.

One cannot lay down definite rules for the proper treatment in cases where the

pelvis is normal and the obstruction due to large child. It is very easy to say that a section should never be done after the patient has been subjected to the test of the second stage of labor. I cannot, however, subscribe to this dictum as I think there are instances in which the desirability of a living child makes it necessary for the operator to take a chance. Williams is a strong advocate of pubiotomy under these conditions, yet even here I think that one can not lay down hard and fast rules.

In eclampsia I have fifteen cases delivered by Caesarean section, twelve by the abdominal and three by the vaginal route. Williams, while admitting that occasionally this operation offers the most conservative means of delivery, says that it is only necessary in about one in fifteen or twenty cases of eclampsia. I am not in possession at present of the number of cases of eclampsia that have occurred in the service during the period under consideration, but I believe that our cases represent a higher operative frequency than one to fifteen or twenty.

Eclampsia is a most trying condition and I do not intend to enter here into a discussion of its treatment, but will simply say that after a considerable experience and a trial of practically every suggested method, I am today without definite ideas as to the best method of treating all cases. Clinically, we are not able to tell just how extensive the liver lesions are in a given case when we first see her, and I believe there are some cases that will terminate unfavorably no matter what treatment be applied.

If we believe that the eclamptic should be immediately delivered, and although I have seen some very excellent results follow more tentative measures, yet I believe that the best general rule to follow is immediate delivery. The Caesarean operation offers in certain of these cases the most conservative means of getting the child from the mother. I say certain of these cases advisedly, and mean briefly stated, cases in which the cervix offers an obstacle, which cannot be overcome, to manual or instrumental delivery. The operation will then be done only in primiparous women with intact cervices and never in multiparae whose cervices are nearly always sufficiently patulous to permit of a perfectly safe dilatation. It may be said here that I have repeatedly seen instances treated tentatively with veratrum viride in which under the apparent influence of this drug the cervix is markedly softened.

The value of vaginal hysterotomy, the so-called vaginal Caesarean section, must not be overlooked here. Unfortunately, the vaginal operation has certain very decided limitations. I have done quite a number and consider it a much more difficult procedure than the abdominal. True the convalescence is much simpler and it does not leave the woman with a uterine cicatrix that may later give her trouble. Yet it should not be done except when the child is decidedly premature and therefore small, and the operator who does one for the first time will find that the proper closure of the wound in the lower uterine segment is no easy matter. I operated once at a private house with very inadequate assistance, and can assure you that the operation struck me as being little short of bungling. By good luck this patient made an excellent recovery.

Eclamptic patients are not in the purely elective class for Caesarean section as our results will show, for in the fifteen cases four of the mothers died. In all of these cases death was said to be due

to the eclampsia; probably a correct statement, but one which I have no means of proving.

In placenta praevia and premature separation of a normally implanted placenta the chief indication for Caesarean section is the condition of the cervix uteri, its apparent undilatability being the point of note. The Caesarean operation is much more definitely indicated in premature separation than in placenta praevia for here one may have a condition of haemorrhagic infarction of the entire uterus which will require hysterectomy.

I have five cases in this class, three of which had complete placenta praevia centralis and two premature separation of the placenta with concealed haemorrhage. They all made uninterrupted recoveries but several were in a condition of extreme exsanguination due to bleeding from the operation, in one the life being apparently saved by a transfusion of her husband's blood.

The diagnosis of placenta praevia having been made, the indication rests entirely on the amount of actual bleeding and the condition of the cervix. If the cervix be sufficiently patulous to permit the introduction of a rubber bag, the haemorrhage can be controlled and undoubtedly a better result obtained for the mother than if her abdomen be opened. On the other hand if the operator thinks he is dealing with a premature separation he must consider together with the condition of the cervix the likelihood of infarction of the uterus, which if present will require the immediate removal of that organ. Hence the indication here is a little more positive than in placenta praevia.

It must not be forgotten that the condition of local hyperaemia of the cervix and lower uterine segment in placenta praevia renders it so friable that attempts at manual or instrumental dilatation will cause most extensive laceration. I have seen one case in which a tear of the uterus produced in this way was of sufficient size to admit the entire hand into the peritoneal cavity. A most important possibility to bear in mind, yet unless the cervix be absolutely intact the rubber bag with its gradual action is certainly more conservative than section.

Myoma uteri has been the indication four times with one death, the fatality occurring in a woman upon whom an attempt was made to enucleate an enormous myoma. This failed and hysterectomy was done. She died of shock and undoubtedly I should have been satisfied with the delivery of the child and postponed the removal of the uterus until a later date. Myoma uteri is, of course, only an indication for Caesarean section when the tumors are located in a portion of the uterus that would obstruct the birth canal, for we have all seen many cases where the fibroid being at the fundus had no effect whatsoever on the labor. When, however, a mymatous uterus becomes impregnated the patient should be subjected to repeated examinations during pregnancy to ascertain the probability of the tumors offering an obstruction at the time of labor.

I have operated on one patient for valvular disease of the heart in which case she was not in labor but her condition of broken compensation was so grave as to make me think that the abdominal route offered her the safest chance. She made an uncomplicated recovery. I do not think, however, that valvular disease of the heart, save possibly mitral stenosis, offers a definite indication for on a number of occasions I have gotten things ready to operate only to find the patient go into labor spon-

taneously and complete her pelvic delivery with comparatively little difficulty.

It is thus seen that in the series of 42 cases there has been only one death directly attrabuted to the operation, to wit: the hysteromymectomy, which died from shock. It is true that three cases died after the operation done for grave eclampsia and some objection may be raised to their being excluded from the mortality stattistics. Yet, as we have every reason to believe that these patients would have died had the operation not been done, I think their exclusion is justified.

Can one come to any definite conclusion from this brief report of the performance of a single operation during the last five years, I think we can say that if one bears in mind at all times the condition of the patient as a surgical risk and avoids as far as possible operating upon cases who are in the unfavorable class, one is justified in saying that the Caesarean operation is as safe a procedure as any other abdominal operation of a like nature, and when properly chosen is a safer means of delivering the child than a difficult pelvic extraction. One, however, must pay particular attention to the purely obstatric indications, and not make the mistake of doing a Caesarean section whenever he is in doubt. This would be flagrant abuse and indicates pitiable lack of judgment and obstetric knowledge on the part of the operator. Eclampsia will undoubtedly give the highest mortality, but I believe here that in proper hands and under proper conditions the death will be more often due to the eclamptic toxaemia than to the operation itself.

Is one ever justified in operating upon cases after the test of several hours in the second stage of labor? I think that under certain circumstances, that is when the operator has had entire control of the case himself, has made all the examinations himself, feels sure of his technique and the importance of a living child is great, he is justified in taking this chance and operating with the full relization that his patient will probably have a more stormy convalescence. I made this statement reservedly, knowing that some of the most experienced operators of the times feel that under these conditions, section should not be done. Yet there are many instances in which a live child is a point of such vital importance that I think the patient and her husband should be told it is their duty to take this increased risk.

In conclusion I would say that Caesarean section is a grave surgical procedure with a very distinct maternal mortality, and therefore one not to be undertaken save by the surgeon with not only thorough surgical training and ability, but also with mature obstetric judgment obtained with a full knowledge of the mechanical problems involved in the passage of the child through the birth canal. Under these conditions it offers a means of delivery of the child that will give good result.

INTRAGASTRIC DIAGNOSIS

Read at Fiftieth Annual Meeting of West Virginia Medical Association, Fairmont, October, 1917.

By Martin E. Rehfuss, M. D.,
Philadelphia, Pa.

Intragastric diagnosis has for its purpose, the diagnosis of gastric affections by means of an analysis of the material drawn from the stomach or better still the result of the chemical and physical examination of gastric work. We realize that all affections whose symptomo-

tology centers around the stomach can be divided into two classes, those which are essentially due to a disease of the stomach itself, intragastric conditions, and those extrinsic conditions which reflexly either through the nervous or circulatory pathways occasion gastric symptoms namely extragastric conditions. That both of these affect gastric function is well known, that they affect gastric function differently will be evident from what I shall have to say. A study of gastric disease may be made from different angles. X-ray studies reveal, form, position, mobility of the origin, as well as motility, therefore those conditions which affect these factors are more or less evident on X-ray study. They do not reveal the type of gastric work nor do they reveal the nature of the material which is secreted, exuded, or formed in the stomach between or during the digestive cycles. This can only be elicited by direct examination of the contents of the working stomach, and I have come here to show some of these results by means of the method of fractional analysis which I have described. This method is now universally accepted because it is evident that an examination at no one period will reveal a true index of gastric work, and because gastric digestion consists of a cycle of constantly changing phases. A study of a series of cases throughout the entire period of digestion will readily reveal the marked difference in gastric digestion in individuals who have exactly the same findings at the one hour point. It is now absolutely confirmed that:

(1) It is impossible to predict the type or character of gastric digestion from a single examination of any part of digestion. Hypersecretion may appear suddenly; periods of hypermotility may supervene; marked regurgitation of duodenal and pancreatic fluid may at any time totally alter the character of the gastric contents; bleeding, and even the exudation of pus in pathological lesions might occur at any phase and be entirely overlooked at another phase. Digestion which is delayed during the first hour may be altogether accelerated during the second hour, subacidity may be followed by hyperacidity and vicious hypersecretion, conditions all of which can only be appreciated by fractional technique and the true significance of many points of which is not altogether clear.

(2) There is a marked tendency toward constancy in the character of the response in the same individual. This is true in nearly every case. An individual who has a tendency toward hypersecretion reveals that tendency on all occasions. Subacid individuals are habitually subacid to nearly all gastric stimulants. In other words there is a remarkable constancy in the character of the response.

(3) Gastric digestion is a beautifully correlated mechanism dependent on perfect secretory and motor tone, intact circulatory and nervous systems, and characterized in health by certain phenomena which are essentially those of the normal organ. Apart from its position in the upper left hypochondrium, it exhibits remarkable constancy in its secretory and motor functions. Normally in health the stomach undergoes alternate phases of digestion and interdigestion. In the interdigestive periods or in the empty stomach, the walls are approximately by the so-called peristole function, there are rythmic tonal and still larger hunger contractions: during the digestive cycle swallowing causes inhibition of peristole function and peristalsis commences reaching as many as 2,000 peristalsic waves for the digestion of a

single meal. Even at this stage it is evident that the two parts of the stomach are essentially different, the cardia and fundus are essentially a food reservoir while the antrum is the rock-crusher or motor which prepares the material after maceration in the fundus for entry into the duodenum. Very different are these two parts of the stomach both in secretion and in motor activity. The cardia and fundus secrete the acid secretion, the pylorus does not, but owing to the nature of its work, is more liberally supplied with mucous glands. The peristaltic waves beginning in the antrum become powerful constrictions in the antrum. The peculiar nature of antrum contractions and the fact that the pylorus only opens occasionally indicates the selective nature of the work which this part of the stomach performs. But even better is the finding of Stengel and Hopkins that the intragastric temperature in the antrum and fundus were very differently altered by the ingestion of cold liquids. The antrum was scarcely affected, the fundus markedly. The acid control of the pylorus as elaborated by Cannon finds its proper function here, the gradually rise in acid secretion on the gastric side opening the pylorus, its impact in the duodenum closing the pylorus, and finally the neutralization of acid chyme in the duodenum finally contributing to pyloric relaxation. Whether we accept this explanation or not, and there are many facts against it, we must realize that during all this time there are definite changes in secretion. We have demonstrated that the stomach is never empty and that there is to be found in the stomach under all circumstances in health a definitely psyiological secretion. This secretion is very different in the active and in the inactive stomach or in the digestive and interdigestive periods. Studies by Drs. Hawk, Bergeim and myself demonstrated that the average quantity of the normal fasting residuum in health was about 50 c. c. that the average acidity was approximately 30 T. A. and 18 free acid, but varying within rather wide limits, that in over 50 per cent there was bile, and that both may occur in the same individual at different times, that there was a constant tendency for the formation of secretion in the stomach even in the absence of stimuli: that trypsin is almost constantly found in the residuum of the empty stomach and is therefore evidence of a normal regurgitant mechanism. The introduction of food results in the evolution of a normal digestive curve which in type is always the same for a given individual but which varies with different foodstuffs. In order, therefore, that we have a basis for the interpretation for pathological cases, it was absolutely necessary that we understand the process of normal digestion. In the laboratory of Physiological chemistry at the Jefferson Medical College, the entire department under the direction of Dr. Hawk and myself have been investigating normal digestion as seen in healthy medical students with a great many different foodstuffs. These reports will appear later and the nature of the work precludes my entering in discussion of these results. I can only go over those details which I discussed before the American Philosophical Society some time ago and which are extremely important.

In the first place there is no fixed normal curve, deviation from which constitutes disease or pathology. We found that large groups of students responded to an Ewald meal in different ways: one group showed high acid figures, a tendency to continued digestive secretion or hypersecretion and we called that the "hypersecretory" normal type; an-

other group corresponded to our preconceived ideas of normal digestion. There was a drop toward the end of digestion. no hypersecretion and a general curve corresponding to our normally accepted figures; a third group was generally subacid and secretion was low in quantity, a group which we called the "hyposecretory" normal group. It was surprising to note that nearly 40 per cent gave the "hypersecretory type." It was also evident from these studies that figures indicating hyperacidity were frequent and not pathological, that hypersecretion of a certain type can be and is a normal phenomenon, and finally that there is a certain group with subacid findings and no symptoms. These studies, extensive and now embracing many thousands of observations, indicate the necessity of a study of the normal individual, before we commence to interpret pathological data, a habit which internal medicine has pursued on more than one occasion. We are therefore, prepared to state that figures of over 100 total acidity, that hypersecretion, that total acid figures below 50, are all to be found consistent with health, but again the important point to be learned is that these figures and findings are normal for a given individual. Under such circumstances, therefore, a individual who repeatedly shows high acid findings and then suddenly exhibits normal acid figures, the normal figures will be pathological for that individual. These findings upset our ideas regarding these points, but no real progress can be made until this subject is thrashed out along these lines. Marked alterations in quantity and quality of secretion, the presence of pus, blood, or pathological detritus, an undue concentration of normal protein these factors are definitely pathological, in any individual. How much the stomach does in preparing food for intestinal digestion can only be appreciated by the use of an instrument like the double gastro duodenal tube, which I described. By means of that instrument, there is remarked a total difference in the material on one side of the pylorus and that on the other. Gastric contents are but roughly comminuted, usually recognizeable, insufficiently mixed with the gastric secretion, duodenal contents are well chymified, and usually scarcely recognizeable. The difference is marked and emphasizes the tremendous amount of work performed by the stomach. Mechanically the antrum of the stomach is the motor for the entire digestive tract and the changes which occur after it leaves this organ are chemical rather than mechanical.

So much for normal digestion. How then are we to study gastric diseases by this method? Obviously disease of the stomach can scarcely exist without altering in some way gastric function. In fact, the basis of all intragastric diagnosis is the alteration produced on gastric function by disease. This is the fundamental principle in gastric work. Ulcer bleeds and therefore it contributes blood to the gastric contents, cancer bleeds and it, too, contributes blood, but in a different way and with different results on the function of the organ, but gastric bleeding occurs not merely in these two diseases, it occurs from congestion incident to portal hypertension, cardiac disease or active congestion due to acute inflammation or erosion of the organ. But not merely are there evidences of intragastric bleeding, but blood can be extrinsic, swallowed and must be disassociated from swallowed blood from the mouth, throat, lungs, ingested feed. All these things are up to the intragastric diagnostician who must correlate findings. The bleeding

from cancer with its alterations and downward reduction in secretion is very different from the sudden and often profuse bleeding of ulcer accompanied by hypersecretion. Swallowed blood with swallowed pus discretely mixed with the gastric contents and containing oral epithelia is different from the homogeneous content coming from a bleeding gastric mucosa. Correlation, circumstantial evidence, complete physical examination enable the medical Sherlock Holmes to finally arrive at a correct conclusion, and determine the significance of gastric blood. Fractional analysis reveals more than this; it demonstrates whether that blood was present in the stomach on the empty stomach only during periods when swallowing of material was likely and later disappearing during digestion; it demonstrates whether as in intragastric lesions that blood appears and increases simultaneously with an increase in digestive activity, or in neoplastic infiltration when the walls become approximated at the close of digestion and are readily irritated, and finally a peculiar type of bleeding in which at the end of digestion or during digestive periods coincident with the reflux of pancreatic secretion there is blood characteristic of duodenal ulcer. The expert in this line will consider all these factors, and experience will make many points clear which are extremely characteristic when once seen.

But blood is not the only evidence of disease for the intragastric dignostician. He looks for pus and mucus and he immediately makes with the microscope a differentiation between inflammatory or rather purulent mucus and non-purlent mucus, findings which have an altogether different significance. Mucus filled with leucocytes means pus and pus means infection and the problem then comes down to the cause and focus of infection. This is the work of the gastroenterologist as well as the bacteriologist. The bacteriologist may ascertain the organism but it is the clinician's duty to ferret out the signifigance and the locati). Gastric pus is nearly always intimately mixed with the gastric contents: swallowed pus like swallowed mucus is nearly always discrete floating in the residuum or the gastric contents. The fine puree of pus with blood and bacteria and organic acids in carcinoma is very different from the microscopic pus in ulcer. Swallowed tuberculosis, bronchitic, or bronchietatic pus is different from either and experience will readily detect what only careful correlation and study at first will serve to demonstrate. At this point something ought to be said regarding bacteria. Bacteria in the stomach can come from four sources, (1) swallowed, much the commonest way; (2) from the gastric wall (gastric infection, infection of the mucosa, infected gastritis, secondarily infected neoplasm; (3) elimination of bacteria by the gastric wall as a normal process of elimination explained by Richet of Paris; (4) regurgitation of bacteria from the intestinal tract, not infrequent and becoming increasing evident as our studies are becoming more advanced. The presence of large numbers of certain bacteria particularly a single pure culture throughout all the phases of gastric digestion is the one significant point in the diagnosis of gastric infection. I have described this point in the Clinics of North America, Philadelphia number. The samples of gastric contents obtained with an Ewald meal are normally almost free from bacteria with the higher powers of the microscope. Abnormally when the normal protective mechanism is lacking and achylia and delayed motor function are present this condition

is exceedingly likely to occur and is seen in achlorhydria hemorrhagica gastrica and in infected gastritis. The future will emphasize the importance of these studies as the condition is by no means uncommon and may markedly compromise health so as to resemble neoplasm. These conditions are almost secondary to infected processes elsewhere. Gastric culture can be accomplished and particular significance attaches to the persistance and frequency of a given organism. In our studies where cultures of bile are exceedingly common the frequency of colon bacilli and even the commoner pus producing cocci emphasizes the danger of the regurgitation of these organisms in the stomach. The work of Rosenow on the selective action of strains of streptococci in producing gastric ulcer, cholelithiasis, and appendicitis likewise indicates that this field is full of promise. Several clinicians have attempted to treat these conditions with vaccines isolated from distal focal infections, while Turck of Chicago uses the organisms found in the empty stomach. While the gastric juice in health may kill the cholera and inhibit the typhoid bacillus, it has scarcely any effect on the sporulating organisms like the tetanus organism. We can by fractional technique obtain gastric cultures and by judicious lavage we can approach the ideal condition necessary for culture.

Intragastric diagnosis, however, does not stop at blood, pus, mucus and bacteria, it searches for by cytological methods evidences of abnormal pathology. This is most favorably performed on the empty stomach, and after lavage of the evacuated stomach with normal salt solution. Pus, a typical cells are then readily identified after that material has been centrifugalized. The common association of oral epithelia, pus from pyorrhea or bronchitis swallowed organisms is so common, but this residuum must first be removed, and repeated lavage performed before diagnostic conclusions can be drawn, and finally the skill of the individual observer will determine the value of cytodiagnosis. A typical cell formation, irregular call proliferation suggestive of neoplasm, excessive polymorphonuclear leucocytosis, imphycytosis, even according to some authors' fragments of atrophic or infiltrated mucus membrane all have their significance, the details of which are not essential at this point.

The presence of bile has varying significance. In spite of the fact that Austin claimed that bile in the empty stomach was of diagnostic significance, our studies have demonstrated that bile on the empty stomach was found in over one-half our normal cases and furthermore that it can be found and then again will disappear in the same individual. The presence of large amounts of bile persistently on the empty stomach is pathological. One point, however, is clear, namely that with those foods in which bile so far as we know plays no part in digetsion, bile should not be found during the digestive phase. Therefore, with an Ewald meal bile is not found on fractional analysis except occasionally in the last sample containing food. Its presence throughout digestion is of diagnostic value and, in the absence of operative procedures on the stomach such as gastroenterostomy, indicates an obstruction below the common bile duct. I have seen three such cases; in two of them there was obstruction by a lesion of the duodenum and in the third adhesions externally. The picture is clear, bile in every sample. It is possible in the absence of organic obstruction to find large amounts of bile, the significance of which is not

clear, and which presumably is due to regurgitated material with a relaxed pylorus. It is now clear that certain cases of intractible nausea are due to this mechanism, with the presence of large quantities of regurgitated bile into the stomach, removal of which occasions relief. Fat digestion is normally accompanied by bile and pancreatic regurgitation, protein digestion with pancreatic regurgitation alone, while carbohydrate digestion is simply accompanied by the later phase in lessened amounts. Pathologically all these phases may be reversed.

The study of the future will be that of the mechanism connected with the regulation of gastric acidity. We know now that optimun acidity is maintained by the regurgitation of duodenal juices. When this fails to occur we have hyperacidity and frequently hypersecretion, and these two phenomena are most commonly seen in obstruction, (pyloric) either obstructive or spastic. Alterations or abberations in this function are for the future. Spencer, in our laboratories has elaborated a method for adequately demonstrating this function in the stomach.

Not merely is it necessary to determine the above points regarding the composition of the gastric contents, but there are other points besides the determination of the acidity which are of value. The first is the determination of soluble protein in the gastric content. In health with an Ewald meal and a normal acidity only a certain amount most easily recognizeable by the Wolff Junghens technique can be found. Any protein in excess of this amount must come from other sources, either pathological exudates (neoplasm, ulcer, infected and inflamed mucus membranes) or from the swallowing of extrinsic protein containing material. The latter occurs only during certain phases and temporarily; in the former the exudation of the mucus membrane which is diseased occurs in a steadily increasing by bycle. This is of particular value in the differential diagnosis of benign and malignant acyylia in which the protein curve is out of all proportion to the acid curve owing to the exudation of soluble protein material. One other point comes into play the regurgitation of soluble protein from the duodenum.

Another point is the nitrogen content or the amino acid content, micro methods such as the Sorensen Formol method now existing by which these factors can be determined. This point remains to be determined, but the indications are that in many ways its significance is similar to that of soluble protein. The ammonia content is likewise a factor which requires further study.

Up until recently nearly all the study of gastric contents recurred to the titratible acidity. This was usually performed by direct titration with indicators such as phenolphthalein and diamidoazobenzol as indicators. Today we know that in all cases this does not enable us to determine the true acidity of the mixture, that is its hydrogenion concentration. In the case of strong acids and bases very accurate results may be obtained in this way, but with weak acids and bases or easily dissociated acids such as acetic acid as fast as the acidity due to dissociated hydrogenions is neutralized and the undissociated acid ionizes further the titration value finally obtained represents the total acid present at the beginning both ionized and unionized. Salts of strong acids and very weak bases and vice versa also hydrolyze during the course of titration and the values obtained in no sense represent the true acidity. Hydrogen

ion centration may be determined through a certain range of indicators indicating a known H-ion concentration or by electrolytic methods. For clinical work, however, the titration method has been retained owing to its ease of application. Much research work has been done on hydrogen ion concentration, but its application to clinical methods has been delayed until normal and pathological results can be correlated.

Up until our studies were carried out, we spoke of figures in excess of 70 total acidity as these of hyperacidity. Now we know that these conceptions must be revised and it is doubtful whether true hyperacidity occurs inasmuch as the acid originally elaborated is of high acid content. Hyperacidity is due to intolerance to normal acidity or a disturbance in the normal automatic regurgitant mechanism (duodenal reflux) for the control of acidity. For instance, in our studies on the psychic secretion we found in normal individuals in the unsaturated psychic secretion an average of 97.2 total acidity, figures which commonly accepted would mean hyperacidity. Furthermore in the acid curves of normal individuals with Ewald meals we found over 40 per cent in which the figures exceeded our normally accepted figures. It was noted, however, that this high point is only developed after a time, and does not occur at the end of digestion, so that the inference follows that abnormally high figures at the beginning or end of digestion are pathological. Another point which is evident is the presence of abnormally high free acid figures closely approaching those of the total acidity and indicating an excess of unsaturated acids, which has pathological significance. Now in considering the importance of high acid figures as mentioned above, we must realize that the presence of demonstrable free acid in excessive amount (and not the symptom of hyperacidity as shown by burning, etc., which as we all know may be found even in subacidities) the finding of large amounts of unsaturated high acid is obviously due to the elaboration of a high acid secretion which has not been automatically regulated by the regurgitation of duodenal secretion. Some authorities like Carlson doubt whether there is ever a secretion of abnormally high acid or a true hyperacidity. Rather is the explanation to be found in a disturbance of the normal gastric regulating mechanism or a disturbance in the nervous mechanism regulating gastric tolerance toward acid. But in almost every instance there is to be found in these cases an increase in secretion which might be explained either on the basis (1) alteration in the circulation in which the products necessary to the formation of secretion are excessive or in which there are circulating stimulants to secretion in excess, secretagogues, and hormones, or (2) alterations in the tone of the regulating nerves namely, vagotonia, which induces hyperacidity and hypersecretion. In the former instance toxins can stimulate the mucus membrane such as excess of intestinal toxins, or even excessive endocrine secretion, thyroid or parathyroid for instance. In the latter instance reflex abdominal conditions, appendiceal, hepatic, gall, bladder, peritoneal, etc., may so alter the tonus of the pneumogastric reflexly as to induce an exaggerated secretory response. These things must be borne in mind in these conditions. Tobacco for instance induces its hypersecretion by its action on the sympathetics supposedly removing the inhibitory responses. The absorption of large quantities of secretagofues from the upper small bowel may induce a pure hypersecretion and this is prob-

ably the explanation of the marked hypersecretion and vomiting seen in many of the delays in this region. Again pyloric obstruction simply mechanically as shown by many observers (Mathes, Bolton, Hamburger and others) is capable of inducing hypersecretion and excessive acidity which is probably explained by the abnormal absorption of peptones and other secretagofues from the stomach and the inhibition of the normal duodenal reflux. All these things come into the mind of the intragastric diagnostician and all of them demand the careful correlation of facts and the summing up of all the possible causes for this phenomenon. The hypersecretion accompanying the end of digestion in duodenal ulcer is entirely different from the hypersecretion accompanying stenotic gastric ulcer and tobacco intoxication. These are manifest to the student in these things. The former occurs at the end of digestion and shows a persistent high secretion after all food has left the tsomach. The hypersecretion accompanying pyloric stenosis is seen almost as soon as food has entered the stomach and is early, while the hypersecretion accompanying tobacco is frequently seen on the empty stomach. All these points must receive consideration and in this field we must rule out the extragastric causes acompanying appendicitis, gall bladder disease, peritoneal disturbances, etc., from the intragastrictis, and true distrubances of the gastric causes such as ulcer, hyperacid, gastrimucus membrane. In the former there is no associated evidence of gastric disease, such as pus, blood, mucus, or even marked derangement in motility. In the intragastric causes, there are to be found associated with the hypersecretion the evidences of a gastric lesion. This therefore will dominate the observer in his analysis of excessive quality or quantity of secretion. Subacid findings and the association of a low secretory out put are analyzed in the same way with the same principles in mind, namely first the primary subdivision between extra and intragastric causes, and secondly the mechanism by which this effect is brought about. Obviously either a disease of the mucosa, or an alternation in the circulation or nervous mechanism is responsible. The first is the most important and comprises all forms of gastritis, neoplasm, carcinoma, syphilis, tuberculosis, diseases which act upon the entire system as well as infections which either through their systemic effect induce geberally cloudy swelling or even local infected foci. The second source of subacidities must be found in alternation in the circulation and blood dyscrasias. These by altering the material essential to secretion as well as by alteration of the glands themselves can be accompanied by subacidity and even achylia. There are certain forms of blood disturbances which are habitually accompanied by an achylia such as pernicious anemia for example. Finally it requires no stretch of the imagination to conceive of altered nervous stimuli in which the sympathetic tonus is exaggerated and the vagus tone inhibited. It is evident, therefore, that in interpreting subacidities, the clinician will distinguish between a subacidity per se and a subacidity associated with definite evidences of mucosal disease such as blood, pus, bacteria, etc. This chapter is an extremely important one and experience has shown that the subacidity of cancer is different from the subacidity of anemia, while the subacidity of chronic gastritis is different from either of these. In the first instance not merely is there subacidity bii increased protein, blood,, pus, Oppler Boas bacilli, lactic acid. In the

second there is usually only subacidity and in the third instance subacidity is accompanied by the myxorrhea characteristic of that disturbance. Motility disturbances likewise form an extremely interesting field for the clinician who studies intragastric chemistry. We distinguish between accelerated motility or hypermotility, in reality accelerated evacuation. But it becomes quickly evident that hypermotility or better increased rapidly in evacuation may be due to exaggerated peristalsis in the presence of a normally acting pyloric-mechanism or even a decreased peristalsis and actual decrease in motor tone in the presence of a patulous pylorus. This readily seen by X-ray examination, the recurring exaggerated peristalsis as contrasted with the peculiar picture of the small scirrhous stomach with the patulous pylorus. The former picture is seen in certain forms of duodenal ulcer and in the forms of nerve hyperirritability while the latter is characteristically seen in the achylias. On the other hand a delay in evacuation or actual retarded evacuation is due either to the presence of obstruction intrinsic or extrinsic or to weakness of the musculature, atonicity, or gastric dilation. These again are readily seen with the X-ray but are depicted in the fractional analysis by the presence of food over periods in which it would be normally evacuated. Certain principles must be borne in mind, however. Extrinsic obstructions such as adhesions from the pylorus to the gall bladder and stenosing duodenal ulcer can produce exactly the same delay as cicatricial or stenosing gastric ulcer or even pylorospasm but the accompanying phenomena are very different. The spastic as contrasted with the fixed stenoses offer an interesting field for speculation and there are varieties of spams which are intractible even to atropine.

Bearing all these facts in mind and I have only touched the surface of intragastric analysis, it will be evident that certain cardibal principles have been laid down, principles as fixed as the laws of organic or inorganic chemical analysis, but we are dealing with a far greater number of variables and therefore our skill in diagnosis will depend not merely on our knowledge of these principles but upon the extent of our clinical experience and the thoroughness of our medical training. The peculiar type of achylia seen in pellagras is uppermost in the mind of the physician in the South, but scarcely enters our mind as a diagnostic possibility in the North. The master clinician, however, is he whose mind is always alive to all the possibilities of a given case and who understands the possibilities of the tools of his trade. We are but emerging from the shadows and the crossings of the by-roads are not quite as clear as they might be, but the future is bright and we believe that the time is not far distant when many of these things as yet obscure will emerge into the light of perfect day.

ANNOUNCEMENTS AND COMMUNICATIONS

From Dr. Franklin Martin, Member of Advisory Commission.

To the Editor.

Subject: Volunteer Medical Service Corps.

1. Your cooperation in publishing in your next issue the enclosed announcement as to the appointment of your State Executive Committee and county representative to handle the affairs of

the Volunteer Medical Service Corps, will be greatly appreciated by the Central Governing Board of the Corps.

2. The mobilization of the doctors of the country is important war-time service, and your action in giving the movement publicity will be directly helpful.

By direction of Dr. Franklin Martin:

ALEXIS J. COLEMAN,
Assistant Secretary,
General Medical Board.

The Central Governing Board of the Volunteer Medical Service Corps of the Council of National Defense announces that the West Virginia State Executive Committee of the Volunteer Medical Service Corps is comprised of the following doctors:

Frank J. Fox, M. D., Bluefield Sanitarium, Bluefield.

Chas. O. Henry, M. D., Fleming Building, Fairmont.

C. S. Hoffman, M. D., Keyser.

S. L. Jepson, M. D., State House, Charleston.

J. E. Rader, M. D., Chairman, Huntington.

Robt. J. Reed, M. D., Secretary, Wheeling.

The purpose of this Committee is to cooperate with the Central Governing Board in prosecuting all activities pertaining to the mobilization and enrollment of members of the Volunteer Medical Corps throughout the state.

The Central Governing Board of the Volunteer Medical Service Corps also authorizes the appointment of one county representative in each county in every state of the Union. The county representatives for West Virginia are as follows:

(Select name of your county representative from county list enclosed.)

Barbour County, Dr. E. L. Hamilton, Belington.

Berkley, Dr. J. M. Sites, Martinsburg; Dr. T. K. Oates, Martinsburg.

Boone, Dr. H. Lon Carter, Danville.

Braxton, Dr. W. H. McCauley, Sutton.

Brooks, Dr. F. B. Hardon, Wellsburg.

Cabell, Dr. J. E. Rader, Huntington; Dr. J. Ross Hunter, Huntington.

Calhoun, Dr. W T. Dye, Grantsville.

Clay, Dr. Stevens, Ivydale.

Dodridge, Dr. A. Pools, West Union.

Fayette, Dr. H. L. Goodwin, McKendree; Dr. J. W. Hopkins, Fayetteville.

Gilmer, Dr. A. W. Rymer, Glenville.

Grant, Dr. John N. Judy, Petersburg.

Greenbrier, Dr. J. A. Jackson, Ronceverte.

Hampshire, Dr. James W. Shull, Romney.

Hancock, Dr. G. W. Wentz, Chester.

Hardy, Dr. R. W. Love, Moorefield.

Harrison, Dr. S. M. Mason, Clarksburg; Dr. T. M. Hood, Clarksburg.

Jackson, Dr. V. L. Casto, Ripley.

Jefferson, Dr. R. E. Venning, Charlestown.

Kanawha, Dr. Chas. O. Grady, Charleston; Dr. J. M. McConihay, Charleston

Lewis, Dr. O. E. White, Weston.

Lincoln, Dr. A. W. Adkins, Griffithsville.

Logan, Dr. S. B. Lawson, Logan.

McDowell, Dr. J. Howard Anderson, Marytown; Dr. Chas. F. Hicks, Welch.

Marion, Dr. C. O. Henry, Fairmont; Dr. W. H. Sands, Fairmont.

Marshall, Dr. W. P. Bonar, Moundsville.

Mason, Dr. H. A. Barbee, Pt. Pleasant.

Mercer, Dr. Samuel R. Holroyd, Athens; Dr. J. F. Fox, Bluefield.

Mingo, Dr. Tunis Nunemaker, Williamson.

Mineral, Dr. C. S. Hoffman, Keyser.

Monongalia, Dr. C. H. Maxwell, Morgantown.

Monroe, Dr. C. C. Bullard, Gap Mills.

Morgan, (See Berkley County).

Nicholas, Dr. L. D. McCutcheon, Richwood.

Ohio, Dr Robt. J. Reed, Wheeling; Dr. R. M. Baird, Wheeling.

Pendleton, Dr. S. B. Johnson, Franklin.

Pleasant, Dr. A. S. Grimm, St. Marys.

Pocahontas, Dr. J. W. Price, Marlington.

Preston, Dr. S. W. Varner, Kingswood.

Putnam, Dr. J. C. Frazier, Buffalo.

Raleigh, Dr. E. S. DuPuy, Beckley.

Randolph, Dr. W. W. Golden, Elkins.

Ritchie, Dr. A. P. Jones, Pennsboro.

Roane, Dr. H. H. Staats, Spencer.

Summers, Dr. O. O. Cooper, Hinton.

Taylor, Dr. E. C. Peek, Grafton

Tucker, Dr. A. P. Butt, Davis.

Tyler, Dr. V. H. Dye, Sisterville.

Upshur, Dr. L. H. Forman, Buckhannon.

Wayne, Dr. O. T. Hines, East Lynn.

Webster. Dr. S. P. Allen, Webster Springs.

Wetzel, Dr. F. E. Martin, New Martinsville.

Wirt, Dr. J. M. Carney, Elizabeth.

Wood, Dr. G. D. Jeffers, Parkersburg; Dr. Roy Ben Miller, Parkersburg.

Wyoming, Dr. W. L. Hunter, Tralee.

To the Members and Friends of the Southern Medical Association:

At this late hour it is with deep regret that we find it necessary to postpone for a year the twelfth annual meeting of the Southern Medical Association which was to have been held at Asheville, N. C., November 11-14. The reason for this is the epidemic of influenza which has reached every nook and corner of our territory, and is now engaging the attention of the profession to such a degree as to render it impossible for them to leave home for some time to come.

To the untiring efforts of the Asheville Committees on Arrangements, to the officers of the Section on Medicine, Section on Pediatrics, Section on Public Health, Section on Surgery, the Southern States Association of Railway Surgeons, Section on Eye, Ear, Nose and Throat, and the Conference on Medical Education, who under the greatest difficulties have gotten up what is probably the best program ever presented to the Association; to the officers and members of the American Association for the Study and Prevention of Infant Mortality, to the National Malaria Committee, the American Society of Tropical Medicine and the Southern Gastro-Enterological Association, who were to meet conjointly with us; and to the various distinguished guests who had consented to attend our convention, we wish to express our special disappointment at this unexpected unfortunate turn of events.

The various papers that were to have been read will be published during the coming year in the Journal so that there will be as little break as possible in the record of the scientific advancement of Southern medicine and surgery.

Next year the Association confidently expects to have the greatest meeting in its history and trusts you will make your plans to be with us then.

Respectfully,

Lewellys F. Barker, M. D., President, Baltimore, Md.

H. H. Martin, M. D., Chairman of Council, Savannah, Ga.

C. P. Loranz, Business Manager, Birmingham, Ala.
October 15, 1918.

October 16, 1918.

From Volunteer Medical Service Corps, Council of National Defense.

To Members of State Executive Committees and County Representatives, Volunteer Medical Service Corps.

Subject: Influenza Epidemic.

1. In view of the present serious epidemic which is sweeping over the country, the Volunteer Medical Service Corps earnestly invites your attention to the following important action:

Urge upon the members of the Volunteer Medical Service Corps that they instruct families under their care to guard against the epidemic by:

Thorough cleanliness of houses, premises, clothing, utensils, and personal cleanliness.

Avoid stirring up dust.

Wash; scrub; flush; sprinkle; and use soap and water thoroughly.

Gargle and spray the nose and throat with an alkaline antiseptic fluid frequently.

Cooperate at once to the fullest extent with the Local, State, and National Boards of Health. Urge and cooperate in preparing towns and cities for the epidemic by establishing emergency hospitals in suitable buildings, by districting communities, and apportioning or dividing medical forces comprising men and women physicians and nurses so that no portion of the community is without medical care.

Circulate as thoroughly as possible and explain to the public the warning and directions printed by the United States Public Health and by local health authorities.

Urge the importance of fresh air and the avoidance of chill and overheat.

In fighting the epidemic give no medicine and use no treatment which may depress the vital forces, especially the heart of the patient.

2. The Army and Navy are fighting and conquering Germans. We must fight and conquer germs without taking anything away from the Army and Navy. Don't ask the Army and Navy for medical and surgical supplies. Use simple utensils for sterilizing; the simplest kinds of beds and bedding; make your own masks and dressings, and fight for yourselves.

3. While the epidemic is on, do no surgical operations unless absolutely necessary to save life.

4. In every way in your power urge the members of the Volunteer Medical Service Corps to cooperate to the fullest extent with the United States Public Health Service and with State and Local Health Authorities.

EDWARD P. DAVIS,
President, Volunteer
Medical Service Corps.

MOBLIZATION OF WOMEN PHYSICIANS FOR ANESTHETIC SERVICE.

Every effort is being made to keep war surgeory at top-notch efficiency and to provide every wounded American doughboy with safe, rapid and comfortable anesthesia, both at the Front and in the Hospitals in Blighty.

In this connection the following telegram is self-explanatory:

(Copy)

Washington, D. C.
Sept. 18

Dr. F. H. McMechan
Avon Lake, Ohio

Proceed at once to secure qualified women physician anesthetists under 45

years, of mental poise; as well as young women graduates, who are competent for such service.

(Signed) Dr. Franklin Martin (per)
Dr. Emma Wheat Gillmore
Chairman Woman Physicians Committee, Council of National Defense-Medical Section.

Those women physicians who are qualified for anesthetic service and who are competent to be intensively trained, are requested, at once to get in touch with Dr. F. H. Mechan, Secretary Interstate Anesthetists, American Anesthetists, Avon Lake, Ohio.

Dr. James R. Bloss,
Huntington, W. Va
Dear Doctor:—

Will you please say in your next issue of the Journal that on account of the prevalence of influenza and the excessive work put upon physicians throughout the state, it has been determined not to hold a conference of health officers as announced for Parkersburg. No such conference will be held until next spring.

In this connection you might also announce that the meeting of the American Public Health Association, which was fixed for October 14-17 in Chicago, has been postponed until December 9th-12th.

Respectfully yours,
S. L. JEPSON,
State Health Commissioner.

October 1, 1918.

To the Editor:—

A gradually increasing misconception of the Art of Anaestheasia has led to a rather unique condition of affairs.

We find that nurses and other lay persons may, by the simple acquisition of a few rules, become anaesthetists. Large institutions have adopted the nurse anesthetist upon grounds of economy, expediency and even sentimentality. It is argued that these workers can be employed at little expense, that the supply meets the demand and that the feminine element eliminates fear and works for smoothness during the induction of the anaesthesia.

These institutions may employ lay persons to take their X-ray pictures and to make urinary, blood or sputum examinations but does any one dream of speaking of these workers as the hospital Roentgenologist or the attending Pathologist? They are employed as technicians. The nurse who administers an anaesthetic is an anaesthetictutian. They can never be more without a medical degree for in order to understand the language of anaesthesia one must have intimate acquaintance with anatomy, physiology, medicine, surgery, diagnosis, psychology and special branches.

The nurse who in discussion with a medical man attempts to defend a theory relating to anaesthesia cannot fail to feel the presumption of it and, if graced with wit, to see the absurdity of such a position. Yet it has actually come to pass that medical men have suffered themselves to be instructed by a nurse in the theory and practice of anaesthesia.

In justice to an important branch of surgery and to our medical conferers who devote their training and their energy to its development let us drop the term Anaesthetist as applied to its non-medical workers and adopt the term Anaesthetic Technician.

PALUEL J. FLAGG.

September 16, 1918.
Charleston, Sept. 16, 1918.

Dear Doctor:—

Gonorrhoea, syphilis and chancroid

have been declared "Diseases dangerous to the public health," and as such are reportable, and if necessary subject to quarantine by the West Virginia State Department of Health.

A bureau for the control of venereal diseases has been established in this city, and I have been assigned by the Surgeon General of the United States Public Health Service to take charge of it.

Circulars of information and blank reports are being sent out. If you do not get yours within a reasonable time, write to me.

We do not ask the patient's name at first—report by number. The name must be reported if the patient does not observe adequate measures to prevent the spread of the disease to othrs.

As a citizen of authority in your community, I am counting on your help in rooting out this detestable evil.

Sincerely yours,
F. F. FARNSWORTH, M. D.,
A. A. Surgeon, U. S.
Public Health Service.

STATE OF WEST VIRGINIA,
State Council of Defense,
Charleston
October 3, 1918.

All Chapters of the Potomac Division of the American Red Cross have been requested by the Division Supervisor at Washington to make a survey in every County of the State of the nursing resources so that it can be used as a national unit to meet the military requirements as well as to conserve the needs of the civilian communities.

Letters of this nature have been received by every Red Cross Chapter in West Virginia, the Surgeon General of the army and representatives of the principal nursing activities of the country having concluded that a new survey, national in its direction and nation wide in its scope, should be taken with all possible haste.

The American Red Cross was chosen by the War Department as the national agency for conducting this survey, since it is by army regulations the reserve for the Army Nurse Corps, and through its organization of chapters and branches can give practical and speedy response to the demand.

Up to August 1st, 1918, the Red Cross had supplied the Surgeon General of the army over 13,000 enrolled nurses. Earlier in the year the Surgeon General had notified the Red Cross that a total of 25,000 nurses would be required by January 1st, 1919.

It is now proposed in making the survey of the nursing resources of this state and nation, that the work in each chapter shall be in direct charge of a committee. This committee will direct the details of the survey and will cover the field completely in order that every nurse may be recorded on a questionnaire which will be provided to the committees by the county chapters.

It has been suggested that some of the more obvious ways of locating nurses are through:

Organizations of Nurses;

Local Registries for Nurses;

State Registration Lists;

Individuals, such as Physicians, Clergymen, Pharmacists;

Organizations, such as Women's Clubs, Health Societies;

Charity Organizations, Boards of Health;

Hospital Organizations and Publicity Methods.

The branches and auxiliaries to the main county chapters of the Red Cross are expected to make this survey in

their communities. These branches and auxiliaries will also appoint their committees for this work.

The questionnaires to be filled out by the nurses will not be mailed to them, but the first work of the survey committee will be to secure names and addresses of nurses, and then to assign these to different people for personal visits. The rule of the survey is to be "personal canvass" and not "canvass by mail," and for this reason the survey committee is asked to enlist the services of as many canvassers as may be necessary to make a house to house canvass, if it feels that all nurses have not been located through special sources of information.

The slogan of the survey is "every nurse, active or inactive, must be located and recorded on the questionnaire.'

October 3, 1918.

From Volunteer Medical Service Corps, Council of National Defense.

To the Editor.

Subject: Article on Classification.

1. We enclose story on Classification in the Volunteer Medical Service Corps, in which we believe the readers of your publication may be interested.

We trust that you can find space for this material in an early issue.

By direction of the President of the Volunteer Medical Service Corps:

ALEXIS J. COLMAN.

The Council of National Defense authorizes the following:

Interest among the members of the medical profession as to how their services are to be used in the Volunteer Medical Service Corps, once they have been enrolled and have put on the badge which indicates their willingness to serve and readiness to respond to a request from the Surgeon General of the Army, Navy or Public Health Service, or from the Provost Marshal General or from the General Medical Board of the Council of National Defense, has led to the announcement by the Central Governing Board of the basic system of classification for the organization. The lines on which the classification is made were determined by the Committee on Classification of the Central Governing Board, and whose report was adopted. This Classification Committee has on it representatives of the Army, Navy, Public Health Service, Council of National Defense, American Red Cross, Hospitals, Colleges, Civilian Doctors, War Industries.

A summary of these classes follows:

Class I—These will be the physicians first recommended by the Central Governing Board to apply for commissions in the Medical Reserve Corps of the Army, Reserve Force of the Navy, or for appointment in the Public Health Service. They include physicians under 55 years of age, who are without an obvious physical disability which is disqualifying, and who have not more than one dependent in addition to self; or who have an income or whose dependents have an income sufficient for the support of dependents other than that derived from the practice of their profession.

There are several exceptions provided for because of evident essential needs. Whether a physician's srvices are essential to his community will be established by the Central Governing Board on recommendation of representatives of the board appointed by it to make a survey of local conditions. Whether a physician is essential to an institution with which he may be connected will be established after conference between representatives of the Central Governing Board and representatives appoint-

ed by governing bodies of the institutions concerned. Similarly, the question of whether a doctor is essential to a health department will be established by conference between the Central Governing Board and the head of that health department. The question whether a teacher in a medical school is essential to that position will be established by the Central Governing Board and representatives of the intsitution. Conference between the board and accredited representatives of industries concerned will determine whether doctors employed as industrial physicians are essential in those positions. A physician essential on his local or medical advisory board will not be disturbed.

Class II—In Class II are physicians under 55 years of age who are without an obvious physical disability which is disqualifying, and who have not more than three dependents in addition to self. These will be recommended by the Central Governing Board, when the need exists, to apply for commissions.

Exceptions in Class II are the same as in Class I.

Class III—These are physicians under 55 years of age who are without an obvious physical disability which is disqualifying, but who have more than three dependents in addition to self; and they are the physicians included among the exceptions from Classes I and II, namely those essential to communities, institutions, health departments, medical schools or industries. They will be recommended by the Central Governing Board to apply for commissions when the emergency is so great as to demend their services.

Class IV—In Class IV are the physicians who are ineligible for commissions in the Medical Reserve Corps of the Army, or Reserve Force of the Navy, but who are available for all other services. The physicians in this class include those over 55, those having an obvious physical disability which is disqualifying, and those rejected for all government services because of physical disability.

Physicians not professionally eligible for the Medical Reserve Corps of the Army or for the Reserve Force of the Navy, or for appointment in the Public Health Service, will be recorded but not admitted to the Volunteer Medical Service Corps.

Applications for enrollment in the Volunteer Medical Service Corps continue to come in from physicians from all over the country and by every mail to the headquarters at the Council of National Defense building. These are being classified as rapidly as possible. Representative physicians from various parts of the country are assisting in the work incident to the classification.

State Executive Committees, enlarged to handle the work of the Volunteer Medical Service Corps, are perfecting the organizations in their states, and county representatives have been appointed in practically every county in the country. Group meetings are being held in many of the states, at which the State Executive Committees and county representatives are being addressed by members of the Central Governing Board of the Volunteer Medical Service Corps.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., EDITOR
C. R. ENSLOW, M. D.
J. E. RADER, M. D. ASSISTANT EDITORS

Huntington, W. Va., November, 1918.

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

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Advertising forms will go to press not later than the 10th of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

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It is with regret that we send out this issue with no account of the Annual Meeting at Martinsburg. Owing to the epidemic of influenza, Dr. Anderson has been unable to send us his report.

The meeting was very interesting and the attendance larger than expected. It is hoped that a complete report will reach the Editor in time for the December issue.

"SPANISH INFUENZY"—"THREE-DAY FEVER"—"THE FLU"

What is Spanish Influenza? Is it something new? Does it come from Spain?

The disease now occurring in this country and called "Spanish Influenza" resembles a very contagious kind of "cold" accompanied by fever, pains in the head, eyes, ears, back or other parts of the body, and a feeling of severe sickness. In most of the cases the symptoms disappear after three or four days, the patient then rapidly recovering; some of the patients, however, develop pneumonia, or inflammation of the ear, or meningitis, and many of these complicated cases die. Whether this so-called "Spanish" influenza is identical with the epidemics of influenza of earlier years is not yet known.

Epidemics of influenza have visited this country since 1647. It is interesting to know that this first epidemic was brought here from Valencia, Spain. Since that time there have been numerous epidemics of the disease. In 1889 and 1890 an epidemic of influenza, starting somewhere in the Orient, spread first to Russia, and thence over practically the entire civilized world. Three years later there was another flare-up of the disease. Both times the epidemic spread widely over the United States.

Although the present epidemic is called "Spanish Influenza," there is no reason to believe that it originated in Spain. Some writers who have studied the question believe that the epidemic came from the Orient and they call attention to the face that the Germans mention the disease as occurring along the eastern front in the summer and fall of 1917.

How Can "Spanish Influenza" Be Recognized?

There is as yet no certain way in which a single case of "Spanish Influenza" can be recognized; on the other hand, recognition is easy where there is a group of cases. In contrast to the outbreaks of ordinary coughs and colds, which usually occur in the cold months, epidemics of influenza may occur at any season of the year, thus the present epidemic raged most intensely in Europe in May, June, and July. Moreover, in the case of ordinary colds, the general symptoms (fever, pain, depression) are by no means as severe or as sudden in their onset as they are in influenza. Finally, ordinary colds do not spread through the community so rapidly or so extensively as does influenza.

In most cases a person taken sick with influenza feels sick rather suddenly. He feels weak, has pains in the eyes, ears, head or back, and may be sore all over. Many patients feel dizzy, some vomit. Most of the patients complain of feeling chilly, and with this comes a fever in which the temperature rises to 100 to 104. In most cases the pulse remains relatively slow.

In appearance one is struck by the fact that the patient looks sick. His eyes and the inner side of his eyelids may be slightly "blood-shot," or "congested," as the doctors say. There may be running from the nose, or there may be some cough. These signs of a cold may not be marked; nevertheless the patient looks and feels very sick.

In addition to the appearance and the symptoms as already described, examination of the patient's blood may aid the physician in recognizing "Spanish Influenza," for it has been found that in this disease the number of white corpuscles shows little or no increase above the normal. It is possible that the laboratory investigations now being made through the National Research Council and the United States Hygienic Laboratory will furnish a more certain way in which individual cases of this disease can be recognized.

What Is the Course of the Disease? Do People Die of It?

Ordinarily, the fever lasts from three to four days and the patient recovers. But while the proportion of deaths in the present epidemic has generally been low, in some places the outbreak has been severe and deaths have been numerous. When death occurs it is usually the result of complication.

What Causes the Disease and How Is It Spread?

Bacteriologists who have studied influenza epidemics in the past have found in many of the cases a very small rod-shaped germ called, after its discovery, Pfeiffer's bacillus. In other cases of apparently the same kind of disease

there were found pneumococci, the germs of lobar pneumonia. Still others have been caused by streptococci, and by other germs with long names.

No matter what particular kind of germ causes the epidemic, it is now believed that influenza is always spread from person to person, the germs being carried with the air along with the very small droplets of mucus, expelled by coughing or sneezing, forceful talking, and the like by one who already has the germs of the disease. They may also be carried about in the air in the form of dust coming from dried mucus, from coughing and sneezing, or from careless people who spit on the floor and on the sidewalk. As in most other catching diseases, a person who has only a mild attack of the disease himself may give a very severe attack to others.

What Should Be Done By Those Who Catch the Disease?

It is very important that every person who becomes sick with influenza should go home at once and go to bed. This will help keep away dangerous complications and will, at the same time, keep the patient from scattering the disease far and wide. It is highly desirable that no one be allowed to sleep in the same room with the patient. In fact, no one but the nurse should be allowed in the room.

If there is cough and sputum or running of the eyes and nose, care should be taken that all such discharges are collected on bits of gauze or rag or paper napkins and burned. If the patient complains of fever and headache, he should be given water to drink, a cold compress to the forehead, and a light sponge. Only such medicine should be given as is prescribed by the doctor. It is foolish to ask the druggist to prescribe and may be dangerous to take the so-called "safe, sure, and harmless" remedies advertised by patent-medicine manufacturers.

If the patient is so situated that he can be attended only by some one who must also look after others in the family, it is advisable that such attendant wear a wrapper, apron, or gown over the ordinary house clothes while in the sick room, and slip this off when leaving to look after the others.

Nurses and attendants will do well to guard against breathing in dangerous disease germs by wearing a simple fold of gauze or mask while near the patient.

Will a Person Who Has Had Influenza Before Catch the Disease Again?

It is well known that an attack of measles or scarlet fever or small-pox usually protects a person against another attack of the same disease. This appears not to be true of "Spanish Influenza." According to newspaper reports the King of Spain suffered an attack of influenza during the epidemic thirty years ago, and was again stricken during the recent outbreak in Spain.

How Can One Guard Against Influenza?

In guarding against disease of all kinds, it is important that the body be kept strong and able to fight off disease germs. This can be done by having a proper proportion of work, and rest, by keeping the body well clothed, and by eating sufficient, wholesome, and properly selected food. In connection with diet, it is well to remember that milk is one of the best all-around foods obtainable for adults as well as children. So far as a disease like influenza is concerned health authorities everywhere recognize the very close relation between its spread and overcrowded homes. While it is not always possible, especially in times like the present, to avoid such overcrowding, people should consider the health danger and make every

effort to reduce the home overcrowding to a minimum. The value of fresh air through open windows can not be over emphasized.

Where crowding is unavoidable, as in street cars, care should be taken to keep the face so turned as not to inhale directly the air breathed out by another person.

It is especially important to beware of the person who coughs or sneezes without covering his mouth and nose. It also follows that one should keep out of crowds and stuffy places as much as possible, keep homes, offices, and workshops well aired, spend some time out of doors each day, walk to work if at all practicable—in short make every possible effort to breathe as much pure air as possible.

"Cover up each cough and sneeze,
If you don't you'll spread disease."
—U. S. P. H. S.

INFLUENZA PRECAUTIONS

By Dr. S. L. Jepson,
State Health Commissioner

What to Do Until the Doctor Comes

If you feel a sudden chill or chillness followed by muscular pain, headache, backache, unusual tiredness and fever, go to bed at once.

See that there is enough bed clothing to keep you warm.

Open all windows in your bedroom and keep them open at all times, except in rainy weather.

Take medicine to open the bowels freely.

Take some nourishing food such as milk, egg and milk or broth every four hours.

Stay in bed until a physician tells you that it is safe to get up.

Allow no one else to sleep in the same room.

Protect others by sneezing and coughing into handkerchiefs or cloths, when necessary, which should be boiled or burned.

Insist that whoever gives you water or food or enters the sick room for any other purpose shall wear a mask, which may be obtained from the Red Cross or may be made at home of four to six folds of gauze and which should cover the nose and mouth and be tied behind the head.

Remember that these masks must be kept clean, must be put on outside the sick room, must not be handled after they are tied on, and must be boiled ten minutes and thoroughly dried every day.

To Householders

Keep out of the sick room unless attendance is necessary.

Do not handle articles coming from the sick room until they are boiled.

Allow no visitors, and do not go visiting.

Call a doctor for all inmates who show signs of beginning sickness.

The usual symptoms are: Inflamed and watery eyes, discharging nose, backache, headache, muscular pain, and fever.

Keep away from crowded places, such as "movies," theatres, street cars.

See to it that your children are kept warm and dry, both night and day.

Have sufficient fire in your home to disperse the dampness.

Open your windows at night. If cool weather prevails, add extra bed clothing.

To Workers

Walk to work if possible.

Avoid the person who coughs or sneezes.

Wash your hands before eating.

Make full use of all available sunshine.

Do not use a common towel. It spreads disease

Should you cough or sneeze(cover nose and mouth with handkerchief.

Keep out of crowded places. Walk in the open air rather than go to crowded places of amusement.

Sleep is necessary for well being—avoid over-exertion. Eat good, clean food.

Keep away from houses where there cases of influenza.

If sick, no matter how slightly, see a physician.

If you have had influenza, stay in bed until your doctor says you can safely get up.

To Nurses

Keep clean. Isolate your patients.

When in attendance upon patients, wear a mask which will cover both the nose and the mouth. When the mask is once in place, do not handle it.

Change the mask daily. Owing to the scarcity of gauze, boil for ten minutes and rinse, then use gauze again.

Wash your hands each time you come in contact with the patient. Use bichloride of mercury, 1-1000, or Liquid Cresol compound, 1-100, for hand disinfection.

Obtain at least seven hours' sleep in each twenty-four hours. Eat plenty of good, clean food.

Walk in the fresh air daily.

Sleep with your windows open.

Insist that the patient cough, sneeze or expectorate into cloths that may be disinfected or burned.

Boil all dishes.

Keep patients warm.

ADEQUATE SUPPLY OF PHYSICIANS MAKES LOWER EDUCATIONAL STANDARDS UNNECESSARY

According to the Census Bureau estimate for 1917, the population of the United States was 106,543,317, and according to the new American Medical Directory, the total number of physicians is 147,812. At the present time, therefore, there is one physician to every 720 people. In the various countries of Europe, just before the world war began, the proportion of physicians, according to the best available authorities, was from one to every 1,500 to one to every 2,500 people. Numerically speaking, therefore, more than half of the physicians of the United States, or actually 76,783, might be withdrawn from civil practice before the proportion to the population would be as low as the highest proportion in any country of Europe, namely, one to every 1,500 of population. One physician to every 1,500 people could readily supply all the needs in thickly populated communities, but the more sparsely settled rural communities would doubtless need a larger proportion—say one to every 1,000. On this basis for the entire country, it would require one physician for about every 1,200 people. If properly distributed, this would be a reasonable proportion considering the improved roads and other means of accessibility by which a physician can now cover a much wider territory than heretofore. Based on the number of applications now going through for commissions in the Medical Department of the Army, there will be at least 35,000 physicians who have been commissioned or will have been offered commissions in the army and the navy by November 1, 1918. As a maximum, however, not more than 40,000 physicians could pos-

sibly be needed by the government service unless the war should continue more than two or three years longer. This would still leave in civil practice one physician to every 988 population. The annual output from the medical schools in recent years has been approximately 3,000 physicians, more than covering the annual loss from deaths.

It is evident, therefore, that so far as the supply of physicians is concerned, there is clearly no danger of a shortage being produced by the present world war even if we should be called on to supply the needs of some of our allies. Consequently there is positively no basis for arguments favoring the reduction of educational standards. As a matter of fact, our medical colleges might all be closed for several years and the annual supply of physicians entirely cut off, and the number of physicians in the United States would still remain in a higher proportion to the population than in the most favored country of Europe. The only valid reason why medical schools should be kept going is that in recent years they have turned out physicians who are eminently better qualified than those of earlier years, and this one reason would be removed if educational standards should be lowered. It is only during the last eight or ten years that the majority of medical graduates each year have had the benefit of higher preliminary qualifications, of better equipped laboratories, of better hospital facilities, and of a training under larger numbers of full time, salaried, expert teachers. Our superabundance of physicians is mostly made up of those who did not have the benefit of these greatly improved conditions in medical schools, many of whom, however, be it said to their credit, through graduate courses and study, have kept up with the advances made in medical knowledge.

Those who are arguing for a reduction in standards one the plea that there is a need of physicians are either misinformed in regard to the facts or have certain special interests which they are striving to uphold. In the light of these facts it is urged that licensing boards generally enforce the present reasonable standard of two years of collegiate work as the minimal requirement of preliminary education. The argument that there is a dearth of physicians should not be looked on as an excuse for lowering educational standards in the interest of any pseudomedical cult. Let the present educational standards, which have been successfully established in recent years, be upheld so that the name of America, from the standpoint of medical education, may retain the high position educationally that it has recently attained among civilized nations.—Jour. A. M. A., Oct. 12, 1918.

State News

Dr. L. V. Guthrie, of Huntington, has been appointed a member of the Medical Advisory Board of Huntington, by order of President Wilson.

* * *

Captain Karl C. Prichard, former Huntington physician, arrived in Huntington Thursday on a ten-day leave of absence. Captain Prichard has been transferred from Camp Hancock, Ga., to Camp Greene, Charlotte, N. C., Evacuation Hospital No. 30, now forming for oversea duty.

* * *

American women physicians and surgeons are to be organized for war service by Dr. Rosalie Slaughter Morton. Dr. Morton has been made a member of the general medical board of the United States hospital in Washington.

Dr. Lindsey T. Vinson, of Huntington, who recently received a captain's commission in the medical reserve corps of the United States army, reported for service at Augusta, Ga., on October 8.

* * *

Dr. A. K. Kessler, of Huntington, who has been seriously ill for several months, is much improved and is able to be at his office again.

* * *

Dr. Nellie Yost and Dr. W. E. Neal were elected Medical Inspectors of the schools of Huntington at a recent board meeting. Dr. Yost's husband, Dr. Guy Yost, is in the service.

* * *

Dr. John E. Cannady, of Charleston, W. Va., has been ordered to Camp Custer. The work formerly done by Dr. Cannaday for the Council of Defense, Medical Section, is being done by Dr. J. E. Rader, of Huntington; that as Medical Aide to the Governor of West Virginia has been assigned to Dr. G. C. Robertson, of Spencer. Dr. H. G. Nicholson, of Charleston, has been appointed examiner for the Medical Reserve Corps.

* * *

Drs. J. E. McQuain, of Spencer, and J. W. McDonald, of Fairmont, are reported as being in France.

* * *

Dr. E. E. Rose, of Huntington, former associate of Drs. Rader and Prichard, has been transferred from base hospital, Camp Sheridan, Montgomery, Ala., to evacuation hospital number 34, which is being formed at that place.

* * *

Dr. Roscoe G. Stottle, of Kenova, has been recommended for a commission in the medical corps of the army. For some time he has been looking after the practice of Dr. T. N. Goff, a member of the medical corps.

In a recent casualty list appears the name of Lieutenant Alvah L. Parsons, of Ripley, W. Va., wounded, degree undetermined. Lieutenant Parsons is quite well known in Huntington and has a number of relatives living in this city.

He is the son of Dr. T. I. C. Parsons, prominent physician and well known business man of Jackson county. Lieut. Parsons is a member of the medical corps of the army, and has been in France for several months. Before entering the military service he was a practicing physician at Dunbar, W. Va., where he enjoyed a lucrative practice.

* * *

Lieutenant Maxwell, of the United States public health service, arrived in Huntington, October 17th, from Charleston, where he conferred with the State Defense Council, and held a meeting with Dr. J. E. Rader, chairman of the medical section of the state council. Lieutenant Maxewll stated that the United States public health service is cooperating with state and local health officials in combatting the spread of the plague and in the efforts that are being made to stamp it out.

* * *

Dr. F. O. Marple, of Huntington, well known eye, ear, nose and throat specialist, associated with Dr. C. M. Hawes, has applied for a commission in the medical reserve corps of the United States army.

* * *

Dr. and Mrs. C. L. Holland, of Fairmont, were in attendance at the State Association meeting at Martinsburg. They were en route from Boston, where Dr. Holland had been taking some work in Pediatrics.

* * *

Dr. F. H. Sisler, formerly located at Sun, is now at Eccles.

Dr. Thos. B. Crittenden, formerly of Horton, is now at Harding, W. Va.

* * *

Dr. Leanden J. Adkins, of Barboursville, died from an attack of influenza October 17. Dr. Adkins was born at Cove Gap.

* * *

Major Merton Postle, who practiced dentistry in Chicago before going into the army, but was well known in Ceredo and vicinity, died at Camp Taylor, October 15, of influenza, followed by pneumonia.

* * *

Dr. O. E. Hicks, of San Antonio, Texas, visited in Huntington recently.

* * *

Dr. J. L. Sowards, well known physician of Greenup, Ky., came to Huntington and offered his services to the city to fight the influenza epidemic. His offer was accepted and he gave very efficient service while here.

* * *

Drs. S. A. Draper and C. E. Haworth, of Huntington, retired physicians, are doing active work during the "flu" epidemic. Dr. Haworth is one of the teachers at Marshall College.

* * *

Dr. L. A. Williams, of Huntington, received his assignment in the Medical Reserve Corps. Dr. Williams' commission has not yet been named. He is fifty-four years of age, thus just barely coming within the age limit for the medical reserve corps, which is set at fifty-five years. Dr. Williams is assigned to report at Fort Oglethorpe, Ga., November 3.

* * *

Dr. and Mrs. J. R. Bloss, of Huntington, attended the State Association at Martinsburg. From there they went to New York City and Rockaway Park, Long Island. At the latter place Dr. Bloss developed a severe attack of influenza, threatened with pneumonia. After a week's illness, he was able to return home.

* * *

Dr. and Mrs. F. L. Hupp, of Wheeling; Dr. and Mrs. C. R. Ogden, of Clarkbsurg; Dr. and Mrs. C. O. Henry, of Fairmont; Dr. and Mrs. E. B. Fitro and daughter, of Salem, and Dr. and Mrs. S. S. Wade, of Morgantown, attended the State Association meeting at Martinsburg.

* * *

Dr. and Mrs. F. L. Fox, of Bluefield, motored to Martinsburg, Mrs. Fox stopping at Hagerstown, Md., for a visit, while Dr. Fox attended the State Association.

* * *

Dr. F. F. Farnsworth, formerly of Frenchton, who was President of the Public Health Council, has been appointed Director of the Bureau of Venereal Diseases, with headquarters at Charleston. Dr. V. T. Churchman, of Charleston, will succeed Dr. Farnsworth as President of the Council. Dr. H. E. Sloan, of Clarksburg, has been named by the Governor to fill the vacancy in the membership of the council.

* * *

Dr. R. H. Dunn, of Charleston, is seriously ill with pneumonia, following an attack of influenza.

* * *

Dr. L. V. Guthrie, Superintendent of the Huntington State Hospital, of Huntington, recently returned from Flint, Mich., where he was called in consultation with other physicians in an important case of insanity.

* * *

We hope to publish a complete list

of those in attendance at the State Association meeting in Martinsburg in the December Journal.

* * *

Dr. H. P. Gerlach and wife, of Huntington, have gone to Florida for the winter.

* * *

Major Walter Point, and Capt. J. W. Lyons, of the Medical Corps, have arrived safely overseas. Both men were formerly from Huntington, but had been located in Charleston prior to entering the army service.

* * *

Dr. Thomas Floyd Stuart, of Huntington, well known physician for a quarter of a century, died October 21, at 705 Twentieth street, where he had resided ever since he came to this city, excepting during the first six months of that period. It may be said that to all intents and purposes he gave his life to the cause of his profession at a time when there was the utmost demand upon that profession for service and sacrifice. He administered to the victims of the plague until overwhelmed by fatigue, until his own reserve force was exhausted and until he was stricken with the disease that he had combatted with all his vigor and knowledge and skill.

Throughout the city, and particularly among the people of the section known as the East End, there is general and genuine sorrow over the passing of this gallant and heroic veteran of the medical profession. He commanded the esteem and respect of all and as a man and a physician he will be greatly missed. Those who knew him best refer feelingly to his kindheartedness and many other good and admirable traits, and to his constant solicitude for everyone who called on him in times of sickness and distress.

Dr. Stuart was born in Greenbrier county, this state, August 26, 1856, and was in his sixty-third year. He was a son of Robertson Stuart, whose grandfather was one of the heroic figures in the battle of Point Pleasant. From ante-Revolutionary days down to the present time, this family of Stuarts has been prominent in the affairs of the state.

Dr. Stuart was a druggist and telegrapher before he began to prepare himself for a career as a medical practitioner. However, he was admitted to practice when 23 years old, graduating from the Baltimore College of Physicians and Surgeons in 1879. In the same year he located in Tazewell, Va., and in November of that year he was married to Ella McConihey, who was born and reared at Grimm's Landing, Mason county. In 1880 they moved to Leon, Mason county, where he practiced his profession, and in 1892 they moved to this city. One daughter was born to them, but she died when nine years old. He is survived by Mrs. Stuart, to whom he was tenderly devoted, who reciprocated that devotion and love in full measure. Two of his brothers, A. B. Stuart, of Greenbrier, and Judge Harry Stuart of Roanoke, both dead, served in the Confederate army. He is survived by two sisters, Mrs. Edmund Sehon of this, city and Mrs. Tom Bowen of Tazewell.

After working day after day to the limit of his endurance, Dr. Stuart, at 2 o'clock Thursday morning, told Mrs. Stuart that he did not want to lie down, adding that he was tired and nervous. He sat up all night long and when morning came both of them realized that he had contracted influenza. Pneumonia did not develop until a few days later, after which his condition grew steadily worse. Not long before his death, when Mrs. Stuart was at his side, he pointed

to the picture of his daughter. He said nothing, but the significance of the gesture can better be imagined than described.

* * *

At the recent meeting of the State Council of Defense, Dr. S. L. Jepson, state health commissioner, appeared before that body on invitation and advised the council of the gravity of the situation in West Virginia as a result of the epidemic of influenza. The State Council expressed its willingness to aid the health department both financially and otherwise to combat the epidemic.

Dr. Jepson advised that Surgeon General Blue, national health officer, had mobilized physicians through the volunteer medical reserve corps, an organization consisting of medical men who have passed the age for active military service, and that he would send these volunteers to cities and towns where the disease was present in its most virulent form.

The Council was unanimous in its view that the situation in West Virginia was most serious and indivdual members were hgh in praise of physicians, health officers, trained nurses, volunteer untrained nurses and all others who have made extra effort to cooperate in stamping out the disease. The duty of the citizen in such an emergency is plain and service in such a case deserves to rank with any service that it is possible to render the country either in the United States or abroad. The volunteer nurses provide a splendid way for women to serve their country and the important service rendered is fully appreciated by the State Council of Defense.

* * *

The splendid service rendered by the Salvation Army in Charleston during the epidemic of Spanish influenza is sufficient evidence of the worthiness of one of the seven organizations which are to participate in a common fund to be raised the week of November 11-18 in a drive which will be known as the United War Work Campaign. The Salvation Army Citadel, a building erected by the people of Charleston for that organization within the year, was turned over as an emergency hospital at a time when there was no place to take the suffering and the heroic service and splendid devotion of Adjutant Harvey and his associates brought the Salvation Army into a high place in the hearts of those who hear the call of "Humanity."

The Salvation Army is one of the seven organizations which are to share the fund to be raised November 11-18 on a percentage based on the national budgets of the organizations. The united campaign is being made at the suggestion of President Wilson who saw in the work of these organizations a "common service" and suggested that contributions be invited on such a basis.

The seven participating organizations are:

Young Mens' Christian Association, (National War Work Council).

Young Womens' Christian Association, (War Work Council).

National Catholic War Council, (Knights of Columbus).

Jewish Welfare Board.

War Camp Community Service.

American Library Association.

Salvation Army.

Medicine

THE PRESENT EPIDEMIC OF INFLUENZA

The present epidemic of influenza spreads so rapidly—attacks in a new spot so suddenly—that it is difficult to

discuss its incidence at the time The Journal goes to press without great fear that it will have completely changed by the date of publication. As we write it is reported that cases in the Army camps are decreasing, some 11,750 new cases having been reported in all Army camps during the twenty-four hours ending noon, October 8. New cases of pneumonia have likewise decreased, totaling some 2,181 with a mortality of 781 for the twenty-four hours. At that date the total number of cases of influenza reported from all Army camps since the disease became epidemic was placed at almost 200,000, with some 20,000 pneumonia cases and between 5,000 and 6,000 deaths in the Army alone. The civilian population has likewise suffered greatly, particular points of attack being in the New England states, in Pennsylvania and in Indiana.

As pointed out elsewhere, the great danger is not from influenza, but from secondary complications communicated in the same manner as the influenza itself. Influenza uncomplicated by cross-infection, in the ordinary person, will run its course, and those who have it will recover. The secondary pneumonia is quite infectious and a serious complication, which up to date has occurred in some 10 per cent of the cases and which has a mortality between 25 and 33 1-3 per cent of all the persons whom it attacks. The prevention of this pneumonia is dependent on a strict isolation of the influenza patient, not so much to protect others against the influenza, but to protect the patient against pneumonia through cross-infection.

In some cases at least an exceedingly rapidly progressing form of pneumonia develops early in the disease, with a great deal of fluid, the lungs being only partially consolidated. The patients may die with a great deal of frothy fluid in the bronchi, trachea, throat and nose, practically drowning in their own fluid. In many cases this pneumonia begins practically at the same time as the influenza itself, and it is these cases which proceed to a rapidly fatal termination. At the same time, indications are that other forms of pneumonia likewise occur. In others, the influenza is a simple uncomplicated and rather harmless disease.

An interesting feature of the present epidemic is the change in the attitude of the public toward public health methods. The changes incident to the war have caused the public to accept freely orders and suggestions as to their mode of living. When health authorities place a ban on public gatherings, when they insist that the windows of public conveyances be kept open, when they insist on absolute quarantine in order to stop the spread of the disease, the public is ready to obey, and does obey to the fullest measure. Another feature is the confidence of the public in public health authorities, apparently the result of the intense education of the public in prophylaxis of disease which has been going on during the past decade. Orders concerning the epidemic are received without panic or alarm.—Jour. A. M. A., Oct. 12, 1918.

CALCREOSE

Calcreose is a creosote produce, made in the United States of America by an American manufacturer. Clinicians have used it with good results in the treatment of all forms of bronchitis and especially the bronchitis accompanying pulmonary tuberculosis. It has been taken for long periods of time, and in large doses, without causing gastric irritation or discomfort; no burning; no nausea. Calcreose is also valuable in gastro-intestinal infections. Inciden-

tally, the price of this product is far below that of other creosote products of foreign manufacture. The booklet "Calcreose Therapeutics," which contains all information as to indications, dosage and methods of administration, may be obtained by writing to manufacturer, whose ad appears in this Journal.

A SUGGESTION FOR SPANISH INFLUENZA

In view of success obtained by Woolley, at Camp Green, and by McCord, Friedlander and Walker at Camp Sherman, in preventing diseases of the upper respiratory tract, such as meningitis, measles, pneumonia and diphtheria, by local use of Chlorazene and Dichloramine-T solutions, it is reasonable to believe that equally good results can be obtained with the same remedies in the prevention and cure of Spanish Influenza.

The method employed at Camp Greene was to gargle or spray the throat three or four times daily with 0.25 percent solutions of Chlorazene. The nasal pharyngeal tract was then sprayed twice a day, or more frequently, with 2 per cent Dichloramine-T solution in Chlorcosane.

This treatment, in association with aspirin and other salicylates, and the generous use of bacterins, has much promise.

QUARANTINE AND ISOLATION IN INFLUENZA

As indications of the attitude of civilian health officials with respect to the value and practicability of quarantine in influenza, it may be noted that the Illinois Department of Health has ordered that the patient must be quarantined until all clinical manifestations of the attack have subsided and the temperature has been normal for three successive days; that in New York City the patient is quarantined and, furthermore, so it is stated, the health department is prepared to compel patients "who may be so situated as to be a menace to the community to go into hospitals." In these and other places, influenza and pneumonia have been made reportable diseases.

The officials of the Navy at first glance seem to be of a different opinion in regard to quarantine in influenza, as indicated by the following extract from Bulletin 37, of the Division of Sanitation of the Bureau of Medicine and Surgery, dated August 9, 1918:

Control in the Navy—"Quarantine and isolation are impracticable on account of the wide distribution of the organism (B. influenza) in health persons and the number of unrecognized cases."

This sounds like a decidedly reactionary statement, but it is possible that it refers to the units in which cases arise, or possibly to persons who have been in especially close contact with those that fall sick, because the remaining sentences of the paragraph read:

"Patients, however, should be put to bed at once, and bed isolation, prevention of droplet infection, and prompt disinfection of mess gear, handkerchiefs, etc., practiced as in measles. Where sick bays or wards are not available for isolation, the use of sheet screens between patients is to be recommended."

Whatever the real meaning of the sentence to the effect that quarantine and isolation are impracticable, the danger to life from influenza in this epidemic is so grave that it is imperative to secure for the individual patient the most complete isolation, whether in home or hospital, not only to prevent the spread of infection from the patient but also to prevent new and secondary infections from reaching the patient. This

need to protect the sick is not emphasized in current advice and instructions to the public from the official and other sources. It appears, too, that in many if not most hospitals little or no attention is paid to the danger of cross-infections with virulent bacteria among their influenza patients. So far as we know, the actual situation in influenza seems to be this: The precise cause of the primary acute respiratory infection is not known—it may be the influenza bacillus; as yet definite proof is wanting—but the momentous peril so far is the development of pneumonia, and this appears to be associated with and in all likelihood caused by different bacteria, of which the influenza bacillus, hemolytic streptococci, and pneumococci are the most important. We know that in experiments, streptococci and pneumococci may be raised enormously in virulence by successive animal passage, and there is good reason to believe that the virulence for man is increased by repeated transmission from patient to patient. The influenza bacillus may act in the same way, that is, a particular strain may acquire increasing virulence as it passes from the respiratory tract of patient after patient. It is to guard against dissemination by contact and droplet infection of strains with exalted virulence that individual isolation is demanded. The conditions in the present influenza outbreak are analogous to those in the cantonments with respect to streptococcus bronchopneumonia in measles, and are to be met in the same ways so far as possible. It is realized that at present the situation in many places is such that individual isolation and other measures to prevent cross-infection are out of the question; but the importance of the principle discussed must be recognized so that with time our methods of caring for respiratory infections may become more and more effective.—Jour. A. M. A., October 12, 1918.

———.

The use of yeast as a preventive aginst and cure for Spanish Influenza is suggested by Dr. Frederick H. Knoff, a leading specialist of diseases of the lungs and physician to the Tuberculosis clinic.

Yeast, Dr. Knoff said, has been used with success for many years in the treat- of acute bronchitis, diseases of the skin and gastro-intestinal diseases. He advises people to eat thee yeast cakes, one with each meal.

The free use of yeast, the doctor claims, will ward off possible attack of Influenza. The product increases the white blood corpuscles, which attack the disease, and thereby adds to the power of resistance in the body, Dr. Knoff explained.

"Many doctors here and elsewhere are administering yeast in treating various infectious diseases," Dr. Knoff said, "and report exceptional results.

"There are many physicians who eat yeast with each meal while treating infectious diseases. Some, whose duties bring them in contact with infectious diseases at intervals, remain on the yeast diet throughout the year. The number of doctors who do this is greater than the public appreciates.

"Records show that yeast has been used with success in previous epidemics of Influenza here and abroad and it seems that if it were to be administered freely in the present epidemic conditions would soon be remedied.

"Spanish influenza, which is ordinarily prevalent in young adults, makes its appearance almost annually in Germany during June and July. Spain experiences an epidemic of the disease practically each year during the months of July and August," Dr. Knoff said.

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JAS. R. BLOSS, Editor
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C. R. ENSLOW
J. E. RADER,
Assistant Editors
Huntington, W. Va.

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THE PASSING OF THE COUNTRY DOCTOR

Address of President Samuel R. Holroyd, Athens, to the West Virginia Medical Association at the Fifty-first Annual Meeting, Martinsburg, October, 1918.

Some years ago, one of the most popular and well known Southern authors wrote a series of articles entitled, "The Passing of the Black Mammy," and the advent of the "New Coon." They were published in serial form by a current magazine, and read by innumerable people. While the caption would indicate that the writer's production had to do with a lighter vein, and only dealt with one of the many institutions which are subject to change and fashion, those who had a tendency towards the sentimental. and had seen the old-fashioned negro in all his glory, supplanted by the latter day "gentleman of color" and education, could not but derive a much deeper inspiration than the author sought to unfold and be impressed by many other changes which are a part and parcel of this restless age which affect almost all of the elements in life's varied activities.

The records of history show that all nations have been subject to the law of change, fashion and evolution,—the inventions and discoveries and institutions of yesterday are old today, and forgotten tomorrow, and it is only by the records which remain either in the pages of romance and history, or in the memories of the few who have viewed these things through the years, and who still revere the sacred days of the past, when the demands for more up-to-date things were not so pressing as the present.

The great world conflict has swept from existence, landmarks which were hundreds of years in construction; almost in a second of time, cities, cathedrals, and the face of nature itself, which have defied the ages, have been blotted from the landscape, and no man can say how the earth will appear to the vision of those who survive, when finally the dove of peace spreads his wings over the world, and the nations

are rested from their carnage. Not only does a great war bring mighty changes in the physical things of life, but in the abstract world, the same law holds sway, and the prophet who can predict that which will remain, and that which will forever cease to be, would be a wonder indeed. But it is not of the unusual and unnatural conditions which are the logical outgrowth of a world war which can be seen and observed by all men that is the subject of this address, but like the author of whom mention was made in the beginning, I only propose to deal with one of the subjects of life's activities with which we come in contact, and that is "The Passing of the Country Doctor." The younger generation of our profession can but dimly realize the changes and mutations which have been wrought in the years since the oldest of those present "began to practice medicine." Automobiles, good roads, telephones, elegant pharmaceutical preparations, interurban lines, and the natural advancement in the use of those facilities which come with experience and practice, have wrought wondrous changes along every line which has to do with a profession which is honored by age, and by the standing of its followers. The people who live in the rural districts, still have their family physician, with all of the modern appliances, but the country doctor who was preeminently a specialist in every branch of his profession is only a memory, but what a pleasing memory he is, being really called to follow the self-sacrificing life which inevitable must be his portion, and laying aside all expectations of wealth, renown, and fame, except as these things came to him in small measure; within the circumscribed scope of his activities, he filled the part which was his allotment, and went about doing good, and was a constant traveler upon the road from Jerusalem to Jericho, healing the sick and afflicted, and bringing health and happiness where there had been only pain and suffering. This country doctor of yesterday was devoid of every selfish motive, and interest, and self was an unknown element in his makeup. Summer and Winter, Spring and Fall, through storm and tempest, as well as sunshine and calm, he went his way, in most cases without money and without price, knowing no class distinctions, at home in the cabin of the poor, as well as the mansion of the rich, he was ever the barrier which stood between the grim reaper and his victim, and between disease and health.

Having the most limited equipment this country doctor must necessarily be a specialist along all lines of medical and surgical activity; hospitals were few and far between, and he must be prepared at any and all times to meet the most desperate emergencies, and to those of this generation, who are familiar with the hospital upon almost every corner, and the extreme degree to which specialism has extended, it is one of the marvels of the ages, how there could be embodied in the one man, such skill as to be able to meet any and all emergencies as they arose, and to combat cruel disease and affliction with the skill and success of a host of present-day specialists. The part which the old-time country doctor played upon the stage of life was not confined to the art of healing alone; he was the depository for all of the heart secrets of his patrons, and however grim the tragedy which came to his knowledge, he had ever before him the oath of Hippocrates, and that which was entrusted into his keeping was as inviolate as though it were not his possession; his

name was the one which innumerable boys and girls carried through life, as their own, for no greater name was known to confer upon the baby than the name of "our doctor." Books could be written, and countless stories told of the country doctor of the past, but there are still living hosts of men and women whose minds are still pregnant with the memories of him, and it will only be when the generations yet unborn hear and read of these men who lived and toiled and gave their all to their fellow-creatures that his achievements and sphere in the far-distant past will be seen and looked upon with the wonder which should have been in all cases his portion while he was a part of country community life.

Yes, the country doctor is passing, and his sun is setting, never to rise again; he accepted his part, he filled his place, his like will never again be seen, but may we of this generation who know something of his work and trials, of his skill and unselfishness, his purity of heart and action, his activity, and now his passing, join in the united acclaim, that no nobler, kindlier, grander race of men have ever risen, lived, and passed, than the country doctor of the yesterdays.

TRANSACTIONS OF THE HOUSE OF DELEGATES, 1918 SESSION, MARTINSBURG, W. VA.

The House of Delegates was called to order by President S. R. Holyrod in the parlor of Hotel Berkley at 9:30 P. M., September 30, 1918.

After the Credentials of the Delegates were received the Committee on Arrangements was calld upon for its report. Owing to sickness in his own household, Chairman Venning was unable to be present and Dr. J. M. Miller of the Local Reception Committee, rendered this Report, stating the reasons for the sudden change, at the last minute, of the place of meeting from Harpers Ferry to Martinsburg and outlining the provisions that had been made to meet the emergency. The Report was accepted and approved and the sincere thanks of the House extended to the Committee and those who had made possible this change without delay or adjournment of the Meeting.

The Report on Scientific Work was then called for and was presented by Dr. Anderson and Programmes of the Session were distributed. This Report was accepted and approved.

The Report of the Committee on Publication was then made the order of business and Editor Bloss responded, giving a summary of the work accomplished by this Committee, the difficulties under which it had to labor because of the great advance in the cost of all work and materials necessary, and urged more substantial financial assistance for the ensuing year.

He then handed in a complete written Report. This Report was received and duly referred to the Council for further action.

The Committee on Public Policy and Legislation not being ready to report, the Report of the Secretary was then called and Secretary Anderson presented the following Report, which was accepted and referred to a Committee appointed by the President and composed of Drs. Ogden, Nicholson and Fox.

Report of Secretary

As the West Virginia State Medical Association traversed the first lap of its second half century of existence it

found its path fraught with responsibilities as yet unequalled in its whole history.

The black clouds of cruel war which have been hovering over Europe for more than three years, have leaped the bounds of the great Atlantic and have enveloped our fair land from border to border and the stern reality of this great conflagration, with distorted and cruel visage, have unrelentedly stared us, as individuals and as an organization, squarely in the face. Thus, as in the days of our inception, we find our land seething in the fiendish caldron of war.

The suddenness and overwhelming bigness of this great struggle have made heavy demands upon the Medical profession. But true to its untarnished escutcheon of high honor and loyalty, we have nobly responded to the call of our Country. From a mere handful at the beginning of the war the Medical strength of the Army and Navy has reached the number of 27,300. Of this number, our little Mountain State has furnished 352, which is approximately 20 per cent of its Medical man-power, 230 of whom were members of our Association, a percentage of 24 per cent; and all honor to their proud spirits, two of these, Drs. H. W. Daniels, Elkins, and A. L. Grubb, Berkley Springs, have paid the supreme price and have given their all—with reverence we speak their names and with pride we enshrine them in our memories and archives as worthy of our adoration.

In spite of the vicissitudes of war our Association has continued to thrive, not only not abandoning its annual meeting, as some of the State Associations have done, but even daring to grow in numbers. This fact becomes more impressive when we consider that in 1914 our membership was 854; in 1915 it numbered 902; in 1916 we reported 909; in 1917 we had 946 paid members; while, already this year, we have an enrollment of 996 which we hope may be increased to 1,000 before the year closes.

According to districts it is as follows:

District	1915	1916	1917	1918
First	166	184	206	218
Second	164	163	174	177
Third	130	129	130	130
Fourth	127	134	124	122
Fifth	141	139	133	149
Sixth	174	160	179	189

Since our meeting at Fairmont in 1917 we have acquired 49 new members, a number have moved out of the State, and quite a few have been reinstated. While not less than fifteen have been reported to your Secretary as having set aside their career of mercy and administration on this Mundane sphere and crossed the Great Divide. Their names are as follows:

Dr. L. L. Skinner, Address, Charles Town; Society, Eastern Panhandle; Date, March 24, 1917.

Dr. A. B. Bush, Weston, Lewis, June 30, 1917.

Dr. H. B. Stout.

Dr. W. S. Gray, Hancock, Md., G.-H.-H. & M., September 3, 1917.

Dr. G. W. Bruce, Moundsville, Marshall, October 6, 1917.

Dr. D. J. Long, Piedmont, G.-H.-H. & M.

Dr. C. J. French, Huntington, Cabell.

Dr. W. G. McGlumphy, Moundsville, Marshall, November 26, 1917.

Dr. Charles M. Frissell, Wheeling, Ohio, February 12, 1918.

Dr. L. L. McKinney, Burnsville, Braxton, February 18, 1918.

Dr. Percival Lantz, Alaska, G.-H.-H. & M., March 26, 1918.

Dr. W. H. Woodruff, Moundsville, Marshall, April 23, 1918.

*Dr. A. L. Grubb, Berkley Springs, Eastern Panhandle.

*Dr. H. W. Daniels, Elkins, B.-R. & T., July 19, 1918.

Dr. W. P. Megrail, Wheeling, Ohio, September 13, 1918.

Let us do homage to their memories, for they all fell victims of our Arch Enemy—DEATH,—some in the peace and quiet of their home surroundings, others mid the roar of cannon and din of battle, striving valiantly for humanity and universal freedom of mankind.

Since our Fairmont meeting the 1918 dues have been straggling in through the whole year, although they should all have been in the hands of the Secretary by April 1st. This probably has in a measure been due to the fact that our 1918 Annual Meeting is in October instead of May.

The following is a summary of these dues as they have been received and turned over to the Treasurer:

Date		Amount
	1917	
October 26	13 names	$ 36.00
December 14	39 names	114.00
	1918	
January 5	38 names	112.00
February 2	37 names	150.00
March 4	109 names	429.00
March 14	47 names	188.00
April 15	211 names	812.00
April 26	55 names	207.00
May 11	81 names	317.00
May 31	49 names	189.00
June 10 (Belated)	23 names	60.00
July 29	112 names	418.00
August 31	123 names	464.00
September 24	30 names	91.00

Although we see from the above that our Association is still growing, however, there is still much room for improvement in the matter of prompt payment of dues and full and prompt reports from the various component Societies. Many misunderstandings between the Association's Secretary and the individual members, during the past year, might have been avoided by the prompt collection of the State dues and the forwarding of the same immediately to the Secretary. During the coming year it behooves every officer and every member of our organization to redouble their efforts to not only retain, but increase the membership, for unless this is done, the inroads upon our ranks made by the European war and the multiplicity of duties resulting therefrom will materially disseminate our numbers. Furthermore, the Secretary of each component Society should endeavor to keep an accurate record of all members entering the Service of the Army and Navy, reporting the same to the State Secretary promptly. Also reporting to the State Secretary all casualties of members as soon as they themselves learn of the same. Furthermore, owing to the unusual change of location of various civilian physicians, it is urged that the local Secretary keep in touch with the same and report removals not only to the State Secretary but to the Secretary of the Society within the bounds of which the member departing from your midst may locate. Also make a special effort to interest new men locating within the bounds of your society in your organization and procure their affiliation with you.

Much as the present war conditions are making extra demands upon our time and energy and engrossing our attention let us remember that there are other questions of vital importance to us as individuals and, collectively, as an organization, upon which we should ponder and concerning which we should endeavor to inform ourselves so that we can act with dispatch and dignity in the safeguarding of our interests. One of these subjects is Health Insurance. Bills of this nature have been introduced into the Legislative Bodies of a number of States and it will only be a question of time until they will be up for consideration in West Virginia. This subject is of vital importance to all physicians and your Secretary would urge that you obtain and carefully consider the report issued by the Committee of the New York State Medical Association. Another subject is Legislation with a view to the Control and Reporting of Venereal Diseases. A paper relating to this subject appears upon your program. A third subject which will be brought to your attention by Dr. W. W. Golden, Chairman of a Committee appointed by ex-President J. E. Rader for investigation, is the more satisfactory adjustment of schedule of fees established by the Workmens' Compensation Commission. All of these with kindred subjects are too large and important to be properly handled in this report. My aim in mentioning them is simply to call your attention to them and urge upon you the necessity of individually familiarizing yourself with them and thus being able to assist the Association in formulating and assuming a fair and dignified attitude with regard to their solution.

Expressing my sincere appreciation of the earnest and zealous co-operation the Officers, the Counselors, the Secretaries and the Eastern Panhandle Committee on Arrangement have given me in my work as Secretary, I submit the above report.

J. Howard Anderson, Secretary.

The reports of the Treasurer, the Council, and the Auditing Committee not being ready, they were postponed and matters of general interest to the Association were discussed as follows:

Drs. Bloss, Holroyd, Henry and Wade talked on Division of Fees with Men in the Service. Secretary Anderson urged that the Delegates exhort the members of their respective Societies to pay their Annual Dues as soon after the first of January as possible and thus avoid missing any numbers of the Journal, receive the full benefits of the Defense Fund, and save the Editor and the Secretary much unncessary correspondence and the Association considerable postage. He cited specific cases in which much time, labor, expense and misunderstanding could have been avoided if certain dues had been paid before the first of April, as per the requirements of the Constitution, instead of in July or August.

The House then adjourned at 10:45 P. M.

The House reconvened at the call of the President at 9:40 P. M., October 1st.

The report of the Treasurer was then called and Treasurer H. G. Nicholson rendered a complete report, which was accepted and referred to the Council for further consideration. The report was as follows:

Hugh G. Nicholson, Treasurer.
In account with The West Virginia Medical Association.

Charleston, W. Va.,
September 28, 1918.

1917	CR.
Oct. 8—By Check No. 176, Loan	$ 200.00
Nov. 20—By Check, Remington Typewriter Company	2.70
Dec. 12—By Check, James R. Bloss, Salary	250.00
1918	
Feb. 7—By Check, James R. Bloss, Salary	150.00
Feb. 26—By Check, James R. Bloss, Salary	100.00
1917	
Dec. 12—By Check, J. E. Rader, Council Meeting	6.50
Dec. 12—By Check, H. R. Johnson, Council Meeting	23.00
Dec. 12—By Check, J. H. Anderson, Council Meeting	14.00
Dec. 12—By Check, R. L. Dickinson, Council Defense	20.00
Dec. 12—By Check, G. D. Jeffers, Council Meeting	9.30
Dec. 12—By Check, C. H. Maxwell, Council Meeting	13.75
Dec. 12—By Check, R. H. Pepper, Council Meeting	6.50
Dec. 19—By Check, H. G. Nicholson, Postage	14.00
Dec. 19—By Check, J. H. Anderson, Postage	14.20
Dec. 19—By Check, Johnson Printing Company	4.90
Dec. 19—By Check, Baltimore Office Supply Company	10.92
1918	
Mar. 11—By Check, Loan	500.00
Mar. 20—By Check, Telegrams Regarding Owen Bill	1.35
Mar. 12—By Check, Johnson Printing Company	23.33
Mar. 20—By Check, Tribune Printing Company	3.75
Apr. 23—By Check, J. H. Anderson, Postage	16.00
Apr. 22—By Check, J. H. Anderson, Salary	125.00
May 13—By Check, Johnson Printing Company	5.14
July 12—By Check, Welch Printing Company	8.75
July 12—By Check, J. H. Anderson, Postage	18.00
July 12—By Check, J. H. Anderson, Salary	125.00
July 12—By Check, James R. Bloss, Salary	500.00
Aug. 5—By Check, Johnson Printing Company	5.66
Sep. 17—By Check, Lohmeyer, Goldsmith, Patterson, Bond	10.00
Sep. 23—By Check, J. H. Anderson, Salary	250.00
Sep. 23—By Check, J. H. Anderson, Postage	40.00
Sep. 23—By Check, H. G. Nicholson, Salary	100.00
Sep. 26—By Check, Medical Defense Fund	1,176.20
Sep. 26—By Check, Indigent Fund	350.00

Sep. 27—By Check, St. Louis Button Company	22.00
Sep. 29—By Check, Johnson Printing Company	59.85
Sep. 28—By Cash, Balance in Bank	641.08
	$4,820.88

1917

Oct. 1—To Cash, Balance in Bank	525.98
Oct. 30—To Cash, from Dr. J. H. Anderson	36.00
Oct. 30—To Cash, from Medical Defense Fund	7.90
Dec. 19—To Cash, from Dr. J. H. Anderson	114.00

1918

Jan. 7—To Cash, from Dr. J. H. Anderson	112.00
Feb. 6—To Cash, from Dr. J. H. Anderson	150.00
Mar. 5—To Cash, from Dr. J. H. Anderson	429.00
Mar. 20—To Cash, from Dr. J. H. Anderson	188.00
Apr. 18—To Cash, from Dr. J. H. Anderson	812.00
May 20—To Cash, from Dr. J. H. Anderson	524.00
June 4—To Cash, from Dr. J. H. Anderson	189.00
June 11—To Cash, from Dr. J. H. Anderson	60.00
Aug. 2—To Cash, from Dr. J. H. Anderson	418.00
Sep. 5—To Cash, from Dr. J. H. Anderson	464.00
Sep. 26—To Cash, from Dr. J. H. Anderson	91.00
Oct. 30, 1917 to Sept. 26, 1918, Loans repaid	700.00
	$4,820.88

Medical Defense Fund of the West Virginia State Medical Association.

1917

Oct. 29—To Check, Dr. S. D. Hatfield	$ 300.00
Oct. 31—To Check, from General Fund	7.90

1918

Jan. 11—To Check, Dr. W. H. Wallingford	250.00
Apr. 2—To Check, Erskine, Palmer & Curle	101.20
Apr. 29—To Check, M. K. Duty, Owens vs. Parks	200.00
Sep. 2—To Check, Dr. J. L. Sameth	325.00
Sep. 28—To Balance in Fund	4,550.70
	$5,734.80

1917

Sep. 29—By Cash, Balance in Bank	7.90

1918

Jan. 5—By Cash, from General Fund	17.00
Feb. 2—By Cash, from General Fund	45.00
Mar. 4—By Cash, from General Fund	102.00
Mar. 14—By Cash, from General Fund	47.00

Apr. 15—By Cash, from General Fund	179.00
May 16—By Cash, from General Fund	42.00
May 16—By Cash, from General Fund	74.00
May 31—By Cash, from General Fund	42.00
June 10—By Cash, from General Fund	18.00
July 29—By Cash, from General Fund	86.00
Sep. 2—By Cash, from General Fund	97.00
Sep. 25—By Cash, from General Fund	21.00
Sep. 28—By Balance in Fund 1917	4,956.90
	$5,734.80

Disbursements this year in excess of collections, 406.20

Indigent Fund.

1917

Oct. 3—To Check, Mrs. G. D. Lind	100.00
Dec. 6—To Check, Mrs. G. D. Lind	50.00

1918

Apr. 22—To Check, Mrs. G. D. Lind	50.00
June 1—To Check, Mrs. G. D. Lind	50.00
July 19—To Check, Mrs. G. D. Lind	50.00
Sep. 23—To Check, Mrs. G. D. Lind	50.00
Sep. 28—To Balance in Fund	508.00
	$ 858.00

1918

Jan. 5—By amount from General Fund	16.00
Feb. 2—By amount from General Fund	36.00
Mar. 4—By amount from General Fund	109.00
Mar. 14—By amount from General Fund	47.00
Apr. 15—By amount from General Fund	211.00
May 16—By amount from General Fund	136.00
May 31—By amount from General Fund	49.00
June 10—By amount from General Fund	2.00
July 29—By amount from General Fund	108.00
Sep. 2—By amount from General Fund	121.00
Sep. 26—By amount from General Fund	23.00
	$ 858.00

REPORT OF EDITOR

Members of the House of Delegates of West Virginia Medical Association, Fifty-first Annual Session.

Gentlemen: During the past year the problem of publishing our Journal has been a very difficult one.

It has seemed to your Editor that each time he even looked in the direction of the publishing office, the price went up; for instance the price for publishing 1100 copies went from $125 for 1200 copies to $150 for the lesser number, with a corresponding increase in price for extra pages and additional copies. The expense of publishing the Journal and mailing it out alone was $1850.32 for the twelve issues beginning with July, 1917, an increase of more than $230. Then again comes the increase in letter postage.

Just here I will reiterate my statement in the report to you last year of the absolute necessity of the local Secretaries promptly reporting dues paid by their members to the State Secretary. It is only in this way that the mailing list can be kept correct. For example, one month of the past year it was necessary to mail 67 additional copies to members of the Association because of the fact that they had been cut off of the mailing list, as delinquent in their dues. Inquiry revealed that their dues had been paid but not reported to Dr. Anderson. Two cents' postage must be paid for each Journal mailed under separate covers, after the total edition has been sent out.

It is going to be a very difficult question to solve to secure any pubilshing firm to bid upon the printing and mailing of the Journal at anything like the figure which we are now paying. The present publisher states to me that to fulfill his present contract he is losing from $75 to $100 per issue.

Under the present circumstances of our war condition, we find it increasingly difficult to hold the advertisers which we have. Unless the members increase their interest in these advertisers and writ to them for prices upon their products and give them to understand that it is because of their support to our Journal, we will certainly lose some of them. In this connection I must say that the assistance of the Cooperative Medical Advertising Bureau of the A. M. A. has been of untold help to us in adhering strictly to the ethical standard demanded by the parent body.

I will give you a condensed statement of the financial affairs of the Journal. An itemized statement of which together with all disbursements will be reported to the Council.

For the year beginning with July, 1917, the total receipts from all sources received by the Editor has been $1,785.30. These together with a balance of $533.52 gives us $2,318.82. The total expenses connected with the publishing of the Journal, exclusive of the Editor's salary, amounts to $1,888.02, leaving a balance of $430.80.

You will see that during the year the income from advertising, etc., even tho the rates for same have been advanced, have not been adequate to meet the expense of publication, this deficit having to be made up from the balance carried over from last year.

We cannot but feel, however, that our State Association has just cause to be proud of its Journal. This is not so much due to the ability of the Editor, as to the assistance of the numerous en-

thusiastic members scattered over the state, who have been exceptionally kind and helpful.

I hope that the amount of work which the Editorship of our Journal entails is realized and that each of our membership will lend his efforts even more enthusiastically in the future than in the past. It is only so that success will be continued and the fond hopes of my predecessor, and myself to make the West Virginia Medical Journal, a Journal among Journals in our profession, be realized.

EDITOR'S FINANCIAL REPORT
July, 1917 to July, 1918.

Received from Advertisers from July, 1917 to July, 1918	$1,772.60
Sale of Journals and Subscriptions	12.70
Balance carried over	533.52
	$2,318.82

Expenses.

Publishing Journals from July, 1917 to July, 1918.

July	$ 148.20
August	145.72
September	148.35
October	148.13
November	148.26
December	151.65
January	152.83
February	161.89
March	158.47
April	155.84
May	163.94
June	167.04
	$1,850.32
Postage	21.10
Telegrams	1.25
Statements (300)	2.50
Letter Heads (1,000)	4.60
Binding Journals for State Secretary	2.50
Commission paid Geo. Hughes	5.75
Total	$1,888.02
Balance	$ 430.80

O. K.—H. R. Johnson, C. R. Ogden, Committee.

The report of Committee on Workmen's Compensation was then called for and Chairman W. W. Golden rendered the following report, which was thoroughly discussed by Drs. Bloss, Johnson, Ashworth, Blake, Butt, Henry, Maxwell and O'Grady. Bloss and Johnson state that they refuse to treat Compensation cases unless the patient or the corporation guarantee the fees. Blake and Ashworth complain that they have not only given time and service, but have furnished braces and appliances, which have necessitated an outlay of cash from their own pockets, for Compensation cases and then the Commission have refused to reimburse them. Butt thinks the attitude of the Commission is too much that of allowing or donating so much to these injured men, when in fact they owe it to them. Henry condemns the attitude of Paternalism and thinks the status of the matter is that of a contract good for both the employer and the employee and should be so looked upon.

The full report is as follows:

REPORT OF COMMITTEE ON WORKMEN'S COMPENSATION

Gentlemen:

This committee was appointed last November or December by the then President Rader. A notice of the appointment appeared in The Journal soon thereafter and with that notice a request

was made that members having grievances against the office of the Commissioner of the Workmen's Compensation Fund should send, in writing, the details of them to the committee. It was the committee's intention to have an interview with the Commissioner as soon as a sufficient number of complaints were on hand. No complaints, however, reached the committee in writing, and so the request was repeated in The Journal of last August. Up to the present date no complaints in writing have reached the committee. Because of this the committee has not deemed it proper to call upon the Commissioner. Numerous complaints did reach members of the committee, but they were not in writing, and consequently could not be utilized for specific discussion.

In a general way the complaints fall into three groups: 1. Those against the law pertaining to the Workmen's Compensation Fund. 2. Those against the regulations of the Commissioner of this fund. 3. And those against the manner in which the law but more particularly the regulations have been applied.

As to the law. The main objection to it is the inadequacy of the maximum limit of $150, and the unsatisfactory provision how the additional $150 can be used. In many cases these sums are insufficient for complete recovery, inflicting injustice upon one or all of the three parties concerned, viz: the workman, the hospital and the physician.

As to the Commissioner's regulations. The complaints are mainly against the unsatisfactory character of the schedule of fees. Nearly all the fees are too small, certainly at the present time, the schedule being substantially the same as when first formulated a few years ago. The members are not satisfied with the explanation by the Commissioner's office that the fees could not be raised to any extent on account of the financial condition of the Fund. Rather is there an impression that the Fund could well stand an increase in the fees. Then there are obvious disproportions in the schedule, such, for instance, as when the amputation of a finger is awarded $2.50, and services in a fractured rib $5.00. The increase in the weekly rates to hospitals to $16.00 per week, this to include all dressing material, is certainly not out of reason, but it is frequently causing a loss in the doctor's fee, even the small fee of the schedule.

As to the manner in which the law and regulations are applied. The grievances are numerous and varied. We will mention a few of them.

A. In a number of cases the Commissioner's office refused to pay physicians for services rendered in the form of dressing a wound of hospital patients on the ground that the weekly hospital rates include dressings. And this notwithstanding the fact that in the schedule fees for surgeon's dressings are specifically provided, viz: ordinary cases first dressing fifty cents to a dollar, in extraordinary dressings two to four dollars, after dressings fifty cents to a dollar fifty. If in addition to this fact it will be remembered that very few if any hospitals in the state include in their rates anything to cover physicians' services, it will become obvious that the word dressing used in the published hospital rate could only mean dressing material and not the surgical treatment of wounds commonly termed dressings. These considerations have been repeatedly pressed upon the attention of the Commissioner's office in protest, with satisfactory results in some cases and unsatisfactory in others, although of a

character and circumstances perfectly alike. Again, in other cases of the same character, physicians were paid their bills for dressings without question. All of whih shows, to say the least, a degree of irregularity of judgment in the Commissioner's office which should not exist.

B. Payment of bills has been refused to at least one hospital surgeon who rendered services to a workman, on the ground that the workman was entitled to the company physician's services. In one instance the case was one in which the upper chest and shoulder were caught between car-couplings, and the company physician, fearing injury to the shoulder joint of a nature that his limited experience could not detect in the presence of much contusion and swelling of the soft parts, referred him to a surgeon of greater experience. The surgeon diagnosed the absence of injury to the joint and sent the injured man back to the company physician. The surgeon's fee for consultation in this case was refused.

Another instance was of a man with an inflamed knee in the early stages. The surgeon to whom the case was referred by the company physician ordered the man to a hospital where he treated him. Both surgeon and hospital were refused payment in this case. This and other cases led one surgeon to press the Commissioner's office for a statement as to what cases would and what cases would not be paid for, so that surgeons and hospitals would know beforehand what they may expect in a given case. He has not been favored with a satisfactory answer. Worse than that: In a letter under date of December 8, 1917 the Commissioner's office wrote the following astounding statement: "Technically speaking, the provision of section 27 'entitled to hospital treatment by reason of his employment or otherwise' would eliminate payment to all hospitals, as all employees in the state of West Virginia are entitled to hospital service at the state hospitals without further charge to them, and any payment made to the hospital for services rendered to employees is what might be termed a donation arbitrarily given by the Commissioner."

C. A serious accident occurred at some distance from a hospital. The attending physician deemed it important to have the hospital surgeon come out to see whether the patient could be removed to the hospital, and, if so, to aid with his special experience to put the patient in safe condition for transportation. The hospital surgeon did so, taking a nurse with him. He made no charge for his and the nurse's services, but rendered a bill to the Commissioner of two or three dollars to cover the cost of the automobile hired to transport him and the nurse to and from the patient. The bill was refused payment.

D. The attitude of the Commissioner's office against the workman's privlege to choose the hospital he is to go to, at least requiring that in many cases the Miners' hospitals be used and no others continues to be a source of irritation among many of our members, especially when the requirement is distinctly to the injury of the patient.

Having found it inadvisable so far for the committee to make a trip to Charleston to see the Commissioner, an invitation was extended to him to join us here at this meeting, and we here-

with submit the letter of invitation and the reply thereto as a part of our report:

Sept. 23, 1918.

Mr. Lee Ott, Commissioner
Workmen's Compensation Fund,
Charleston, W. Va.

Dear Sir:

The West Virginia State Medical Association will hold its next annual meeting at Harpers Ferry on 1, 2 and 3 of next month. On behalf of the Association's Committee on the Workmen's Compensation Fund and thereby on behalf of the Association, I take the liberty to invite you to be present at that meeting. Considerable misunderstanding has arisen during the past year between your office and members of the Association. We believe that you could readily clear up all misunderstandings by talking matters over as you did at our annual meetings on one or two previous occasions. We are impressed with your disposition to treat the doctors fairly and we also believe that you have good reason to know that the doctors, certainly as a rule, are eager to co-operate with you to the best interest of the trust in your charge. But many things have occurred during the past year which tends apparently to disturb this mutual confidence. We are anxious to have these things cleared up and no doubt you are too. May we hope to have the pleasure of your presence with us this next week? As the 2nd day of the meeting usually has the largest attendance, would suggest that you join us on Wednesday the 2nd day of the month and the 2nd day of the meeting. Of course, we would be greatly pleased to have you with us throughout the meeting.

Yours very truly,

Wm. W. Golden,

Chairman of Committee on Workmen's Compensation Fund of the W. Va. State Medical Association.

Sept. 24, 1918.

Dr. Wm. W. Golden,
Elkins, W. Va.

Dear Sir:

I have your letter inviting me to attend the meeting of the Medical Association, to be held at Harper's Ferry on the 1st, 2nd and 3rd of October.

I am sorry I did not know this sooner, for the reason that I certainly would like to meet with you and discuss the medical side of Workmen's Compensation.

I am personally strongly in favor of making the law more liberal in the way of medical, surgical, and hospital fees, and co-operation is about the only way we can bring this about, as there are a number of influences that are against increasing this maximum. Personally I think that there are no reasons why there should be an unlimited amount allowed, yet there should be enough to cure the injured employee and get him back into the industry as good as medical aid or professional services would be able to accomplish.

All together we have had a year of complete success in the carrying on of this work. Our fund today is in a solvent state, and we set aside enough money to pay all our liability to maturity.

We have had very few complaints from your profession, an odd one here and there, and these are only questions of misinterpretation of the law. I have

no particular fault to find with the medical profession of the state of West Virginia as a whole.

If I am unable to meet your association on the 2nd day of October you have my best wishes, and I assure you I will be glad to meet your Committee on Workmen's Compensation at any time, and go over any recommendations I have to make with you, and discuss any points that you may raise, with the object in view of reaching an agreement whereby we can all support any remedial legislation that may be contemplated and brought before the legislature this coming winter.

If I can so arrange my affairs I will be glad to meet you.

Very truly,

LEE OTT,

State Compensation Commissioner.

The committee begs leave to recommend that the Commissioner's invitation be accepted and that a committee be appointed to call on the Commissioner to talk matters over. This should be done between now and the time our next legislature convenes and that the actual expenses of the committee incurred be paid by the Treasurer of the Association on presentation of itemized bills.

Respectfully submitted,
WM. W. GOLDEN, Chairman.
SAM'L. R. HOLROYD,
J. HOWARD ANDERSON,
CHESTER R. OGDEN.

The committee to which the President's address was referred, begs leave to report that the eulogy of the Country Doctor as pronounced in this address is eminently fit and proper and that many of the beautiful sentiments expressed by our worthy President deserve to be widely read and therefore recommends that the address be given wide publicity by printing it as a leading paper in an early issue of our Journal.

W. W. GOLDEN, Chairman.
S. L. JEPSON,
C. O. HENRY.

Report of the committee to consider and make recommendations on the report of the "Committee on Workmen's Compensation Law," presented to the House of Delegates at the evening meeting on Tuesday, October 1st, 1918, by Dr. W. W. Golden, Chairman:

Your committee begs to submit the following recommendations:

I. That we accept the report of the committee presented by Dr. Golden with the recommendations contained therein; and that, if this committee is not a standing committee that it be continued with its present personnel.

2. Amplifying and explaining the report of the committee we think this committee should attempt by its proposed conference with the Compensation Commissioner, the Governor and other interested parties, to accomplish the following objects by revision of the present law:

(a) Revision of fees.

(b) That injured workmen be allowed the privilege of choice in the hospital where they shall be treated as well as their medical attendant. This will obviate the necessity of removing injured workmen long distances to the State Hospitals.

(c) As a corrollary to the last recommendation, that the Compensation Commissioner be required to pay the existing State Hospitals or any that in the future may be established, the same rates of compensation for hospital care as it pays to other hospitals which fees would thereby help support these State institutions and thereby lessen the bur-

den of supporting these institutions by general taxation, putting the burden at support in each individual case where it legitimately belongs.

3. That as soon as this committee has accomplished any tangible results it make recommendations to each of the component county societies as to what steps are desirable and feasible toward influencing the coming legislature.

Respectfully submitted,
H. R. Johnson, Chairman.
C. H. Maxwell.
C. W. Waddell.

Martinsburg, W. Va.,
October 2, 1918.

The report was received with thanks and a committee composed of Drs. Johnson, Maxwell, and Waddell was appointed to make recommendations based upon the same.

The House then adjourned.

The House of Delegates reconvened at the call of President Holroyd on October 3rd at 12:15 A. M.

The following officers were elected for the ensuing year:

President—Robert J. Reed, Wheeling.

First Vice President—J. Franke Fox, Bluefield.

Second Vice President—S. M. Mason, Clarksburg.

Third Vice President—C. M. Hawes, Huntington.

Secretary — J. Howard Anderson, Marytown.

Treasurer—H. G. Nicholson, Charleston.

Delegate to A. M. A. for 1919-1920—C. R. Ogden, Clarksburg.

Alternate—W. W. Golden, Elkins.

Councillors:—

First District—H. P. Linsz, Wheeling.

Second District—C. H. Maxwell, Morgantown.

Third District—L. H. Forman, Buckhannon.

Fourth District—J. E. Rader, Huntington.

Fifth District—E. H. Thompson, Bluefield.

Sixth District — Charles O'Grady, Charleston.

Clarksburg was then chosen as the place of meeting for 1919 and the time of meeting specified as May.

The following reports were then received and approved:

Report of Council.

Report of Auditing Committee.

Report of Committee on President's Address.

Report of Committee on Secretary's Report.

Report of Committee on Report of Workmen's Compensation Committee's Report.

Votes of thanks were then unanimously passed extending grateful appreciation of the Association to the following:

The Eastern Panhandle Society and Local Committee.

The Ladies, who furnished and served the banquet.

The Churches of Martinsburg, who opened their doors to us for our meetings.

The Press of the City.

The Parties who furnished automobiles for the Orchard Trip and the proprietors of the Orchards.

The Berkley Hotel and its Employees.

The House of Delegates then adjourned Sine Die.

BERKELEY SPRINGS, THEIR HISTORY, WITH SOME OBSERVATIONS ON THE THERAPEUTIC VALUE OF THEIR WATERS AND REPORT OF CASES

Read at Annual Meeting, Martinsburg, October, 1918.

By M. F. Hamilton, M. D.,
Mannington, W. Va.

To prepare a paper treating of the Berkley Springs as a place for persons to resort in the search for that fountain of perpetual youth which in the days of early Spanish discoveries was supposed to exist somewhere in America, such paper would fall short of its purpose if it failed to include at least a brief review of the history of them and their environments.

From the most available authentic sources we learn that the first white settlers of this region were of Scotch, Irish and German descent who came from New York, New Jersey, Pennsylvania and directly from Europe. The first nearby settlements were made on Sleepy Creek, a few miles away, by the Spohcer's and Zeilors, and by the Smiths who settled a little farther up the same stream. This was about the year 1730. Descendants of these first settlers still reside in the neighborhood. These early settlers had the good fortune to be at peace with the aboriginal inhabitants for some twenty-five years and might never have been at war except for quarrels of kings in Europe.

For a century after the settlement of the region by the white race these thermal fountains known as the "Warm Springs," were the center around which clustered all the tradition and early history of this part of the "New World."

But long before Europeans had set foot upon the shores of the Western Continent these springs had been frequented by the Indians and by them highly esteemed for their curative properties, especially in rheumatic affections to which they are said to have been subject. They came from far and nearby regions bringing their relatives and friends, aged and infirmed. During the summer period the neighboring hills and valleys were covered with wigwams. Among these were the tribe of Tuscaroras, who inhabited the regions thereabouts; the Six Nations and Delawares, who came from the valley of the Susquehanna and northward as far as the Great Lakes. The Catawbas, of the Carolinas are also said to have been frequent visitors.

The Red Man of the forest regarded these waters as the gift of the Great Spirit and buried his stone hatchet and scalping knife while in the neighborhood, treating the country round about as a neutral zone.

About the year 1745 huts whose walls were of pine logs and roofs of bark, were erected and occupied by white settlers who began to appear along the hillsides among the habitations of the Indians whom they finally superceded altogether. In those days "a spacious hollow scooped out in the Sand" through which the waters gushed, partially hid by overhanging trees, served as the luxurious bath for the whites and red skins alike.

The first improvement of the baths was the erection of circular screens made from evergreen boughs.

In the Spring of 1748 a party of strangers approached the open ground

around these springs from a bridle path through the dense forest which encircled it on every side. The men were better clad and equipped than the mountain settlers of that day. Several were mounted and led pack horses laden with provisions, camping equipage and surveying outfits. When they had unpacked and made preparations for supper, the leader of the party accompanied by a tall, athletic sun-burned youth, approached the spot where the waters bubbled from beneath the mountain, and after carefully examining the premises and testing the water by taste, hand and eye, determined to try the baths and they pronounced it the most refreshing and luxurious they had ever experienced. These visitors were a party of Baron Fairfax's surveyor's, the youth was George Washington, then about 16 years old. In his diary he wrote of this occasion: "March 18, 1748. We, this day, called to see the famous Warm Springs. We camped in the field this night." This notation by Washington would indicate that they were then well known to the settlers of Eastern Virginia, Maryland and probably elsewhere.

One of the divisions of Gen. Braddock's Army on its ill-fated expedition to attack Ft. Duquesne, passed near the Springs; Sir John's Run, a small stream a half mile west, taking its name from Braddock's chief quartermaster, Capt. Sir John Sin Clair. After the disastrous defeat of this Army, French and Indians came into the vicinity and killed and captured a few of the peace-loving white inhabitants, not far from the Springs. Some of the prisoners returned after several years and have descendants still living in the community from whence they were taken. After French had been beaten at Ft. Duquesne and Quebec and a treaty of peace made between England and France, the Indians retired forever beyond the Ohio.

These Springs, recognized by the aborigines as the gift of the Great Spirit for suffering humanity, by grant of the British Crown became the property of the Right Honorable Lord Fairfax, Baron of Cameron, as part of "the Northern neck of Virginia."

This sensible old gentleman at the beginning of the American Revolution recognizing that original gift reconveyed the Springs, with fifty acres adjacent land, in trust for the benefit of the public of that day and all generations to come.

The first act of any law-making body relating to these Springs was that of the Assembly of Virginia, dated October, 1776, the first year of the Commonwealth, the preamble of which reads as follows: "Whereas it hath been represented to this General Assembly that the laying off fifty acres of land in lots and streets for a town at the Warm Springs, in the County of Berkley, will be of great utility by encouraging the purchasers thereof to build convenient houses for accommodating numbers of infirm persons who frequent springs yearly for the recovery of their health." This preamble was followed by a long enactment appointing Bryan Fairfax Samuel Washington and ten other distinguished Virginians to lay the fifty acres out in lots one-quarter acre in size with convenient streets, establishing the same as a town by the name of Bath which to this day is the corporate name of the town; also, providing for the sale of lots, etc.

Gen. David H. Storther, a prominent author, in commenting on this enactment nearly fifty years ago, said: "That the General Assembly of Virginia, three

months after date of the Declaration of Independence, with the terrible responsibilities of an unequal war with the power of Great Britain staring them in the face, should have found time to consider and enact this long and carefully prepared bill, is an indication that at that day the object was thought to be of first-class importance, and that the preservation of the public health was one of the means by which they hoped to accomplish their national independence."

The following year, 1777, the town was laid out and during the summer occurred the first lot sale. Among the purchasers were Gen. George Washington, Gen. Horatio Gates, Charles Carroll, of Carrollton, Rev. Charles Mynn Thurston, and a long list of others prominent in the history of Maryland and Eastern Virginia. It is probable that many of the purchases were made by agent as so many of the purchasers were at that time engaged in the struggle for liberty. But it is well established that the town during the whole period of war was thronged with visitors from the lower country, among whom were the families of distinguished patriots, care-worn statesmen and disabled army officers, regaining their wasted strength. During this time a number of cottages and boarding houses were erected on the lots purchased. Nevertheless, from lack of accommodations many came in covered wagons, encamping on adjacent hills.

The Baroness de Reidesel through her journal of events of that period gives us some inside information. She was the wife of a German General in Command of Hessians forming part of the British Army captured at Saratoga. This woman remained with her husband during his captivity. At Charlottsville, Virginia, he suffered sunstroke which was difficult to treat. Here we quote from her journal: "The use of a certain bath in Virginia, which is called Frederick Springs (Berkeley), was prescribed for him, and we accordingly journeyed thither. We made at the Frederick Springs the acquaintance of Gen. Washington's family, and also of Madam Carroll and her husband. She was a most lovable woman and an ardent patriot but reasonable, and we became great friends. She spent most of her forenoons with us. At such times Capt. Geismar played the violin and I sang Italian airs, which gave her the greatest delight. One day, while thus engaged, a countryman, from whom we had in vain endeavored by many kind words to obtain fresh butter, came in upon us. As Americans are generally fond of music, he listened attentively, and when I had finished he asked me to sing again. I asked him sportively what he would give me for a song and he answered, 'two pounds of butter.' As soon as I had sung another song, he said, 'Play another tune, but give us something lively'." But enough of this.

The next year after a treaty of peace was ratified between the Colonies and England, the following advertisement appeared in the old Maryland Gazette:

"To the Public

Warm Springs, at Bath, in Berkeley County, Virginia, June 13, 1784. James Rumsey and Robert Throckmorton propose opening a very commodious boarding house for the residence of ladies and gentlemen who may honor the bath at the sign of the liberty pole and flag. Every possible attention will be paid to render the situation of those who honor them with their commands perfectly agreeable."

It seems that Rumsey was engaged

in the mercantile business in the town with Nicholas Orrick, an old resident of the County, and had been employed by the trustees of the Springs to construct baths.

In this same year, 1784, a Richmond newspaper contained the following: "We are happy to find that the convenience of a medicinal bath, supported on a plan of propriety and decorum has engaged the attention of the public. In Berkeley County five bathing houses with adjacent dressing-rooms are already completed."

About this time Rumsey used the proceeds from his varied occupations to construct an instrument that was to revolutionize the world's transportation. In the little secluded harbor at the mouth of Sir John's Run, Rumsey in the presence of a select company which he had invited to accompany him from the Springs, about two miles distant, he introduced to the world the first steamboat. How Rumsey failed to reap a just financial reward for his genius and how a later vessel happened to be launched on the Hudson by another some twenty-three years later is well-known history.

For many years after these events Berkeley continued to be a favorite resort for invalids and luxurious pleasure seekers, little of historic interest in recalled. During the war of 1812 many thousands of visitors came from tidewater settlements to escape the British who landed on our shores.

In 1820 a new county was formed from from portions of Berkeley and Hampshire and Bath was made the county seat, it being the only incorporated town in the new county which was named Morgan, in honor of Gen. Morgan, of Revolutionary fame.

Meanwhile numerous other mineral springs were improved in various parts of the country with accommodations more elegant and costly, and Berkeley declined in comparison, but those who had learned of the virtues of her waters could find no other waters equal to those of Berkeley for relieving their gout and rheumatism, so they and their descendants continue their visits to this day.

The completion of the Baltimore and Ohio railroad to Hancock Station in 1843, a destructive fire among the old hotels and boarding houses in 1844, the erection of a large modern hotel with improved bathing establishments from 1845-8 had the effect of again introducing Berkeley to the fashionable world. But in the war between the States Berkeley being only two miles south of the Potomac had many excitements and as a resort was almost without patronage. It regained its prestige slowly after the close of the war.

Abont the year 1898 the large hotel was burned as was also the old Florence House leaving Berkeley without anything worthy the name of hotel. Since that time, two new hotels have been built, with modern improvements, know, respectively, as the Dunn and Washing ton. There are also many modern cottages used as boarding-houses so that many persons can be well taken care of at a time. The baths have been recently improved by tile-lined swimming pools and private baths. A larger capital is needed, however, to enable Berkeley to successfluly compete with some other inland resorts as a fashionable watering-place.

These springs are located in 39° 39' North, and in longitude West from Washington 1° 10', 186 miles northwest by west from Wheeling or Parkersburg, 217 miles fromPittsburgh and 6 miles South-west from Hancock Station on the Baltimore & Ohio Railroad where it has a connection by a shortline railroad.

From the character of their water they were originally called the Warm Springs, then the Frederick Springs, from Frederick County within whose limits they were comprised prior to 1772. In that year Berkeley County was formed from the northern portion by Frederick, including the springs, and was thereafter called Berkeley Springs, and the town established in 1776 was named "Bath" from the famous wells of a town of that name in England.

These springs issue from the base of a sandy ridge about 450 feet above the valley, and lying parallel with the important ranges of the Appalachian System which deflect about 27° from a due north and south line. This ridge is formed by the upheaval of sand stone strata. The outcropping of this sand stone may be observed on all the highways crossing the mountains as far south as Bath County, Virginia, and very many of the mineral springs for which Virginia mountains are celebrated are found in or near this Warm Spring Ridge.

The Berkeley Springs have five principal sources and numerous smaller ones within a space of about 100 yards and have a flow of about 2,000 gallons per minute. The waters are clear and sparkling without offensive taste, with a uniform temperature of 74° Fahrenheit. The volume is sufficient to supply the town, the baths and several industrial enterprises, and empties into the Potomac River some six miles below through a stream called Warm Spring run. The Springs are still owned by the state, being an inheritance from the Mother State by reason of war-time division.

Before showing results obtained in my own practice, I shall take the liberty of quoting some extracts from a letter written by Dr. C. W. Chancellor, of Baltimore, author of a treatise on "Mineral Waters and Seaside Resorts," to a medical friend, in August, 1886, he himself having been a great sufferer from rheumatism. "Nature has done a great deal for Berkeley. There are five principal springs or sources, which discharge about 2,000 gallons per minute of alkaline, thermal waters, sparkling and pleasant to the taste. "Nemausus by its crystal limpidity is not purer nor Timavus fuller in its bed.

"These waters are naturally highly carbonated, but hold only a small quantity of mineral matters in solution, which explains why the water is such an excellent digestive beverage. When hyper-carbonated it is quite equal, as a table water, to the celebrated apollinaris of Germany.

"But the glory of Berkeley is its baths, which, in point of temperature and volume of water, are simply superb—a health-giving luxury fit for the gods. The therapeutic action of these baths is both peculiar and surprising, such as cannot be accounted for by the small quantity of mineral principles contained in the water, though these undoubtedly influence, to a greater or less extent, their action on the human organism. Both Erdman and Gottle have discovered electro-magnetic currents in the thermal waters of Carlsbad, in Bohemia; and I am quite certain, that electricity plays an important role in the therapeutic action of the Berkeley waters, from the fact that the influence of the baths upon my system is precisely that which I experienced after taking the baths at Carlsbad, only the Berkeley baths are more pronounced in beneficial results, for after a few baths I have thrown aside my crutches and

can now stand firmly on my feet, which I had not been able to do for nine months previous to coming here.

"Concerning the principles and practice of hydropathy, I do not propose to speak at this time; but I may say here, that I have great faith in the judicious use and application of mineral waters, and consequently have sought their healing agency in all parts of the world. Assertion itself is very easy, and not always redeemed by subsequent experience, but in my case, as well as that of many other sufferers from gout and rheumatism, personal experience affords no means or narrow basis for forming a very high opinion of the healing powers of the Berkeley waters." The foregoing quotations from Dr. Chancellor coincides with my own personal observation that these waters are suitable for the treatment of rheumatism, diabetis melitus and alcoholism. The water is alkaline, an analysis of which I will append, plainly shows it well suited to the treatment of the above-mentioned and kindred diseases. When the water is taken into the stomach it is taken up by the circulation and eliminated by the kidneys, it being very diuretic and only slightly laxative. Hence, any one can see the benefit that may be derived by an eliminative both by the warm baths and the drinking of the water by removing uric acid in rheumatics, sugar or toxins in diabetics, alcohol in alcoholics, etc. I have seen so many remarkable cures that it would seem to be impossible for these to be mere happenings.

Sajous recommended alkiline waters for diabetes melitus. I do not claim that these waters will cure diabetes in the young, but for those who contract the disease in the middle life or old age, the use of this water in profusion, both internally and in bathing, they may have a reasonable assurance of having their sufferings alleviated and to live out their expectancy.

Those with a system soaked with alcohol, with tongue reddened, internal organs and brain congested, a few days of taking freely of the water, along with warm baths and an occasional plunge in the swimming pool, soon regain their appetite, sleep well, and become normal.

Soon we will have national prohibition, hence fewer cases of this kind will come under our care.

I believe I can better show the benefits derived from these springs (which as before stated belong to our state) by report of cases.

Case of Diabetes Melitus

Male, age 65, farmer, very much emaciated, fetid breath, specific gravity of urine 1,045, laden with sugar and other characteristic symptoms that accompany the disease. Went with patient to springs and directed him as to the quantity of water to drink and when, also as to warm baths. In three days' time patient feeling much better, specific gravity of urine normal, fetid condition of breath gone. Patient remained at springs two weeks and came home so much improved that he went into the hay harvest. Two weeks later, due to heat and over-exertion he lapsed into former condition. A pimple on neck which later developed into carbuncle the size of an ordinary saucer. Patient returned to springs where I was called to see him. On evening of my arrival cut carbuncle thoroughly. Next morning cauterized thoroughly with full strength carbolic acid. Patient made good recovery and said he believed he owed his life to the elimination of the poison from his system by the use of the water. This

patient lived three and a half years after coming under my care and lost his life through exposure.

Diabetes Mclitus, Case No. 2

Patient, female, aged 70, has been a diabetic for a number of years. Came under my care last March. Her son came to me saying his mother had a very bad eye. On visiting patient found her suffering from a carbuncle located in outer canthus of riyht eye. Had about recovered from carbuncle, size of walnut, between the eyes. Found patient to be a diabetic, specific gravity of urine 1,040. Sugar in urine. Side of face swollen, eye reddened and bulging from pressure of carbuncle. Family suggested calling an eye specialist from Baltimore. I replied, "Why not take her to Berkeley Springs and remove the cause and then we can hope to get a cure of eye." Treated eye several times on train with Sat. Sol. boric acid. Was fearful eye might become destroyed before reaching springs. Had patient drink freely of water, hot baths. First night practically no sleep or rest. Treated eye several times during night. Second night patient slept and rested nearly all night. Next day began to eat and feel much better. In three or four days swelling all out of side of face. Carbuncle continued discharging from corner of eye. Eye still much inflamed. Tested urine, specific gravity 1,025, five per cent sugar. Left patient in charge of nurse to keep up treatment. Patient returned home in three weeks completely recovered from carbuncle, eye restored to normal condition. Patient continues use of water shipped to her, continues in good health with no return of carbuncle.

Rheumatism

Patient, male, age 57. Came under my care last June. Had suffered from inflammatory rheumatism through the previous winter and spring. Found him confined to his bed part of time. Most of his time spent on crutches. Rheumatism in different parts of the body. Right ankle red, and swollen to twice normal size. Reached the springs with patient Monday evening. Had him get busy drinking the water and taking hot baths each day. By Friday of same week patient was able to throw aside crutches and did not even have to use cane. Swelling and pain almost gone. Patient remained at springs between two and three weeks, returning home completely cured. No return of rheumatism since.

Sciatica; Myself the Victim

A number of years ago, I suffered from an attack of inflammatory rheumatism. Confined to bed six weeks, finally recovered. Later, about ten years ago, had an attack of sciatic rheumatism in late autumn, the result of exposure, which lasted all the winter. After a protracted course of the usual method of treatment I again recovered. About five years later, under similar circumstances, the same nerve became again affected. After two weeks of severe suffering I went to Berkeley Springs. Drank the water and took the warm baths, following the warm baths with water of the natural temperature di-

rected along the course of the sciatic nerve. After the fifth bath pain entirely left me. I continued the treatment five or six days longer, and except as to a slight numbness of limb for a few days, I entirely recovered and have had no rheumatism of any kind since.

To the "booze-hoisters," (I thank God they are getting fewer) I recommend that they go to Berkeley, take the hot baths, and occasional plunge in the swimming pool, and they will in a few days eat and sleep.

Under my personal observation I have not only seen those above mentioned, but dozens of other persons who were suffering aforementioned and other diseases, not only benefitted but cured by the use of these waters.

In conclusion, the object of this paper is not only to call the attention of the doctors of our state to the value of these springs as a curative agent; that they are the property of the people of the entire state; but to the end that our Legislature and State government may be urged to bring the virtues of these waters to the attention of our National Government as a place for treating invalid soldiers. A sanitarium might be built for all-the-year service, and being but a hundred miles from the National Capital by rail, and only six miles from the great system of the Maryland State roads connecting also with the District of Columbia roads, the accessibility of the place is without question.

I have no financial interest in Berkeley Springs, being only interested as a citizen of our state.

I would suggest that such physicians present at this meeting as can conveniently do so, visit the springs on their return home, the distance from Martinsburg being only twenty-eight miles by rail or auto.

Now, if I have in my weak way, brought the Berkeley Springs a little nearer to the front, I thank you.

Analysis of Berkeley Springs Mineral Water

	Grains per U. S. Gal.
Sodium Chloride	0.142
Sodium Sulphate	0.598
Sodium Nitrate	0.026
Potassium Sulphate	0.116
Calcium Sulphate	0.572
Ferrous Carbonate	0.005
Manganese Carbonate	0.004
Calcium Carbonate	6.720
Magnesium Carbonate	1.110
Stronitum Carbonate	trace
Silica	0.496
Alumina	0.045
Ammonium Chloride	absent
Albuminoid Nitrogen	0.0012
Organic Matter	0.275
Total	10.1102

Gases, Cubic Inches Per Gallon

Free Carbonic Acid	2.22 cu. in.
Carbonic Acid in Bic'n'a's	7.14 cu. in.
Dissolved Oxygen	0.41 cu. in.

Temperature 74.3 degrees Fahrenheit.

C. D. Howard, Analyst,
W. Va. Agl. Experiment Station.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., EDITOR
C. R. ENSLOW, M. D.
J. E. RADER, M. D. ASSISTANT EDITORS

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.
Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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Again we come to the holiday time. How wonderfully thankful we are for the blessings which have come to us.

One cannot but feel that God in His surpassing wisdom has judged that the hearts and minds of men are sufficiently purged of the base things. Surely He has rebuked the nations of men which had come to place the material in existence so far above the spiritual. Today all men realize as never before that we are "our brothers' keepers."

There is, it is true, much sadness in the hearts of many, because loved ones are absent at this season, who were in the midst of last year's gladness. Still, if we but stop to think, we know that they are not dead, but only gone on just a little before us upon the road of eternal life, then we do not feel this sense of sadness and loss.

Many American homes have given up lives to protect the whole of civilization from destruction. Those of us who have not so given find ourselves unable to put into words the deep sympathy we feel for those who have. From men who are, and have been, over there, we learn

that death had lost its sting and that they gave their all cheerfully to a highly sacred cause.

Our State Association has given of its best in this war. We miss them and shall continue to miss. Those of us who knew them well will treasure their memory.

May we who remain to carry on earnestly strive to be worthy of the kinship of these crusaders. May we try to do our bit both cheerfully and well.

I wish each of my Professional Comrades a Happy Christmas and Prosperous New Year.

The recent meeting of the State Association at Martinsburg was a remarkable one in several respects. One of the things which impressed a number of us was the fact that such a large proportion of the attendance was composed of those who come year after year. Your Editor has only been a member some thirteen years, so feels he is but a mere boy compared to these "Old Dependables." We have gone year after year and found them always ready to respond "Here!"

One came to look longingly forward to the meetings, knowing he would meet these friends he had come to know and love.

Dr. S. M. Mason, of Clarksburg, was elected to the First Vice-Presidency at the recent meeting. He was one of our friends. He has passed on. The beautiful sentiments expressed in the tribute paid him in the resolution of his home Society find an echo in our heart.

At a meeting of the Harrison County Medical Society, held October 22, 1918, in respect to the memory of Dr. Selma Marstella Mason the following was inscribed in the minutes:

Dr. S. M. Mason was born at Gainsville, Va., November 3, 1876, and was educated at the Columbian University at Washington, D. C., receiving the degree of Bachelor of Sciences, in 1899, and that of Doctor in Medicine in the following year, after which he served for some time as interne at the Columbian and other hospitals. He came to Clarksburg, W. Va., in 1907, soon after he became connected with the Kessler hospital, as manager and surgeon in charge, which position he held until 1917 when he organized the the Mason Hospital Company, and erected the new Mason hospital, which is one of the most modern and best equipped hospitals in the state, and is a beautiful monument to his untiring labors, and in which he has served as manager and surgeon in chief until the time of his death.

Dr. Mason was a leader in his profession, energetic, active, progressive and ethical and an untiring worker.

He took great interest in the medical societies to which he belonged, being a member of the American Medical Association, West Virginia Medical Society, and Harrison County Medical Society.

It was while attending the West Virginia Medical Society's meeting at Martinsburg, W. Va., that he contracted influenza, coming home on October 3, when he took to his bed, soon developing broncho pneumonia, from which he died October 21, 1918, at 4:30 o'clock p. m., in the hospital which bears his name. He was not only a leader in his profession but a progressive citizen as well as being interested in many of the local enterprises of his home town, as well as extensive farming interests in his native state near Gainsville, Va. He took deep interest in his community, serving as coroner of Harrison county for a number of years, a prominent Ma-

son, member of the Knights of Pythias, and Benevolent and Protective Order of Elks, and Episcopal Church.

Dr. Mason married Miss Lillian Brown, daughter of J. W. Brown, of this city, on November 18, 1903. To this union have been born three daughters and one son, namely: Ruth Virginia, Beuna Wilson, Anna Marstella and Selma Marstella, Jr.

He was a devoted husband and a kind and loving father, busy as was his life he was often driving with his family which he enjoyed so much.

To his family we extend our deep sympathy. In our fellowship with him the thought comes:

"Some time at eve, when the tide is low,
I shall slip my mooring and sail away,
With no response to a friendly hail
Of kindred craft in a busy bay.
In the silent hush of the twilight pale,
When the night stoops down to embrace the day,
And voices call in the water's flow—
Some time at eve, when the tide is low,
I shall slip my mooring and sail away,
Through purple shadows that darkly trail,
O'er the ebbing tide of the unknown sea.
I shall fare me away with a dip of sail,
And a ripple of waters to tell the tale,
Of a lovely voyage sailing away,
To a mystic isle where at anchor lay
The craft of those who have gone before,
O'er the unknown sea, to the unknown shore.
A few who have watched me sail away
Will miss my craft from the busy bay;
Some friendly barks that were anchored near,
Some loving souls that my heart held dear,
In silent sorrow will drop a tear;
But I shall have peacefully furled my sail
In mooring sheltered from storm and gale,
And greeted the friends, who have gone before,
O'er the unwnown sea, to the unknown shore."

E. A. Hill,
B. F. Shuttleworth,
T. M. Hood,
Committee.

MEDICINE AND SURGERY IN THE WAR

War speeds up all lines of human endeavor. This is true not only in the producing of the material necessities, such as cannon, shells, ships and so on, but also in scientific achievements as well. It would have taken many years for the scientific facts at present known in regard to aviation to have been acquired. So it is with regard to all the branches.

In none have the advances in knowledge been greater than those made by our own profession. Ever since the beginning of hostilities we have been reading of the marvelous achievements accomplished in the realm of surgery. Many volumes have already made their appearance as a result of the work and observations of the army men. Some of these victories almost surpass ones ability to understand.

So far there has not been so much said of what has been done by the purely medical men. It will be sometime yet before the lessons learned as to hygiene, diet, etc., will be realized and appreciated at their true value.

NO MORE PHYSICIANS TO BE COMMISSIONED IN THE MEDICAL CORPS

At ten o'clock on the morning of November 11th, the War Department dis-

continued the commissioning of physicians in the Medical Corps.

This condition, in all probability, is permanent and no further consideration will be given applicants for a commission in the Medical Corps until further notice.

The following issues of the Journal are wanted: May, 1918—two copies; April, 1918—two— copies; September, 1918—three copies. Please mail to the Editor.

State News

Deep shock and grief were felt by the friends, when the name of Captain T. L. Barber, of Charleston, appeared in the casualty list. Captain Barber organized the only ambulance corps in West Virginia shortly after he received his commission as lieutenant in the Medical Corps and was soon after promoted to the rank of Captain.

For many months his unit has been attached to the First Division, which has been under fire since the beginning of the war, but until recently he escaped without wounds. Captain Barber was only thirty years of age and held a place of high esteem in the social and professional circles of his home in Chicago, where he at one time did hospital service. He was the oldest son of the late Dr. and Mrs. T. L. Barber, of Charleston, and had a wide circle of relatives and friends in this city, where in years gone by he often visited.—Herald Dispatch.

* * *

Dr. I. R. LeSage, Captain in the M. R. C. of the army, was in Huntington recently visiting his family, while en route from Columbus, where he was on duty at one of the Student Army Training camps during the influenza epidemic to Syracuse, where he has been assigned for duty.

* * *

The following appointments were recently made in the M. R. C.: To be First Lieutenants, Grover Cleveland Blake, Tunnelton; Frank Valentine Langfitt, Salem; Henry Evan Davis, Switzer; Abisha Gordon DeFoe, Bruceton Mille; Ira Vernon Grissom, Princeton; and Richard Mitchell Riley, Nutter.

* * *

Dr. W. W. Heald, of Huntington, Lieutenant in the M. R. C., stationed at Camp Greenleaf, visited his family recently.

* * *

Dr. O. L. Baker, formerly of Ronceverte, is now located at Lewisburg.

* * *

Dr. H. H. Roberts is associated with the Medical Staff of the White Sulphur Springs Hotel Company.

* * *

Major H. D. Hatfield, of Huntington, of the M. R. C., has been transferred from the south to a government hospital in Detroit.

* * *

Captains Guy Yost and E. E. Shaffer, of Huntington, of the M. R. C., have arrived safely overseas.

* * *

Lieutenant (Dr.) T. Judson McBee, of Morgantown, is a visitor in Washington and is receiving instructions here before he again sails for France and the front. He came over from there in charge of a company of patients being brought to the hospitals here.—Washington Paper.

* * *

Dr. and Mrs. H. P. Gerlach, accompanied by Mrs. E. B. Gerlach, have gone

to Palm Beach, Fla., where they will spend the winter. Mrs. E. B. Gerlach will stop while en route in Columbus, S. C., to visit her husband who is a lieutenant in the medical department of the United States army.

* * *

Dr. W. E. Grim, of Cameron, has been commissioned a captain in the medical reserve corps of the army and has been ordered to report for duty at Fort Oglethorpe.

* * *

Dr. L. C. Montgomery, of Montgomery, health officer of that community, died of influenza during the recent epidemic.

* * *

Capt. Karl C. Prichard, of Huntington, has arrived safely overseas.

Dr. F. O. Marple, of Huntington, has reported for duty at Fort Oglethorpe, Ga., in the M. R. C.

* * *

Dr. Fenton T. Adams, of Latonia, Ky., was called to Holden to treat miners during the influenza epidemic.

* * *

Dr. S. L. Jepson, state health commissioner, has addressed local boards of health throughout the state that, as he cannot possibly know local conditions as well as the local health authorities, he will not assume the responsibility for removing the quarantine restrictions.

This must be determined by the health authorities of each municipality and county, and upon them must rest the responsibility for the results of their action, Dr. Jepson says.

* * *

Dr. Frank C. Fox, of Bluefield, attended the called meeting of the Council of the Volunteer Medical Corps at Charleston recently; when en route home he stopped at Huntington.

* * *

Dr. Otto Herenkohl, of Sharples, W. Va., died in November of influenza.

* * *

Capt. J. O. Hicks, of Huntington, has arrived safely overseas.

Dr. Guy M. Yost, captain in the medical reserve, is at present in charge of an emergency hospital in Reading, Pa., having been sent there recently from Camp Crane, Allentown, Pa., where he was preparing for overseas duty. This word was received by his wife, Dr. Nellie Yost, 942 Fifth avenue.

Dr. Yost writes that at Reading the doctors and nurses are wearing masks made of two thicknesses of gauze with a phenol putty between. This means that the putty is treated with carbolic acid. He says that the plague is beginning to be stamped out in the east. Dr. Yost is receiving the best of accommodations at Reading, being quartered at the Elks club.

He and the other medical officers from Camp Crane are only sent out within a radius of forty miles, that they may be easily recalled when an opportunity presents itself for their embarkation for overseas.—Herald-Dispatch.

* * *

Dr. L. A. Vinson and Mrs. Marie Cort Huntington, were married November 10. Dr. Vinson is a captain in the M. R. C., and is stationed at Camp Hancock, Ga.

* * *

Dr. H. G. Tonkin, mayor of Martinsburg, has received a commission as captain in the M. R. C., and has reported for duty at the army corps at Hot Springs, S. C.

BOOK REVIEWS

Clinical Diagnosis. A Manual of Laboratory Methods. By James Campbell Todd, M. D., Professor of Pathology, University of Colorado. A 12 mo. of 678 pages, 232 illustrations and 12 colored plates. Philadelphia and London. Price, Cloth, $3.00.

This book is a useful compilation of laboratory methods of great use to the practitioner and student. It makes choice of the best accepted methods, explaining carefully and in detail. In this edition the new Bass and Johns concentration method for malaria parasites; the fractional method of gastric analysis; the Wilber and Addis method for urebilin as an aid in diagnosis of pernicious anaemia adds greatly to the value of the book. The chapters on the urine and the blood are very good. Chapter six on animal parasites is of special value to any who may be interested in this subject. An appendix giving the methods of preparation and the uses of various staining solutions together with a schedule of office laboratory equipment adds much to the value of the book to the beginner.

The Hodgen Wire Cradle Extension Splint. By Frank G. Nifong, M. D., F. A. C. S. With an introduction by Henry G. Mudd, M. D., F. A. C. S. With 124 illustrations. C. V. Mosby Company. 1918.

This little brochure is an exemplification of a splint produced and perfected by Dr. John Thompson Hedgen, and named after him. Its manifold uses are set forth and its application carefully and fully explained. The mechanism of fractures to which it is applicable is gone into at some length and its virtues compared with other splints, the uses and application of which is fully gone into.

The Medical Clinics of North America. Volume II. Number I. Octave of 311 pages, 57 illustrations. Philadelphia and London: W. B. Saunders and Company. 1918. Published Bi-monthly. Price per year, Cloth, $14.00. Paper, $10.00.

There are 15 contributors to this number. The Clinic of Dr. Tohmas F. Reily, Fordham Hospital, The Minor and Misleading Early Symptoms of Disease of the Heart and Circulation is very instructive and of great practical importance.

Dr. E. Libman, Mount Sinai Hospital, exemplifies and discusses the Clinical features of Sub-acute Streptococcus and Influenzal Endocarditis in the Bacterial Stage will be noted as of esepcial interest owing to the prevalence of the Influenza epidemic now raging throughout the whole country. This number is up to the usual standard of the publication, replete with matter of interest to both the general practitioner and specialist.

Surgical Treatment. A practical treatise on the Therapy of Surgical Diseases for the Practitioner and Students of Surgery. By James Peter Warbasse, M. D., Fellow of the American College of Surgeons; American Medical Association; American Academy of Medicine, New York Academy of Medicine; Formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, New York. In three volumes with 2400 illustrations. Volume I. Philadelphia and London. W. B. Saunders Company, 1918. Price, Cloth, $30.00 the set.

If this volume is any criterion of the

two succeeding ones, the work will take high rank among surgical classics. Of pleasing literary style and showing sound surgical judgment it will be hailed by the profession as a reliable, up-to-date exposition of surgical procedure and will be of the greatest value to both practitioner and student, neither of which classes can afford to be without it.

A Treatise on Clinical Medicine. By Wm. Hanna Thomson, M. D., LL. D., Physician to the Roosevelt Hospital; Consulting Physician to the New York State Manhattan Hospital for the Insane, and the New York Red Cross Hospital; Formerly Professor of the Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine.

The author's statement that a treatise on Clinical Medicine should chiefly consider the subjects which concern the physician when he deals with the sick is well exemplified in this, the second edition of a work which has been found to be very satisfying, instructive and interesting to many general practitioners of medicine. The author's statements are clear and concise, and the treatment of conditions under consideration seems to us sensible and to the point without a lot of useless speculation usually indulged in by many authors. The subjects considered are of much practical importance, the conditions described being so frequently met with in every day practice, as witness one of the opening chapters, on Catching Cold and the section on The Greatest Cause of Disease and Death, which will be found replete with practical points. The chapter on the use of remedies, how they may be classified according to their special application, etc., will be found replete with suggestions of useful nature when well digested and intelligently applied. The book will amply repay the financial outlay, as the possession will give a comfortable feeling of being armed with a reliable guide in the practice of medicine. Price, in cloth, $5.50 net. Second revised edition. Octave of 678 pages. Philadelphia and London: W. B. Saunders Company, 1918.

Principles of Surgical Nursing. A Guide to Modern Technique. By Frederic C. Warnshuis, M. D., F. A. C. S. Visiting Surgeon, Butterworth Hospital, Grand Rapids, Michigan. Chief Surgeon Pere Marquette Railway. Secretary of the Michigan State Medical Society. Editor of the Journal Michigan State Medical Society. Member of the Michigan State Board of Registration in Medicine. With 255 illustrations. Philadelphia and London. W. B. Saunders Company. 1918. Price, Cloth, $2.50 net.

The author very modestly disclaims any intention of attempting to impart such a degree of information and instruction as will enable one to acquire all the knowledge necessary to become a finished nurse, but aims to inculcate such principles as will enable one to lay the foundation to a successful pursuit and acquisition of much useful knowledge which may be broadened and enlarged by conscientious work, reading, study and experience. How well he has succeeded may be learned by a perusal of the pages of the book. Profusely and beautifully illustrated by 255 well executed cuts it seems to be well adapted to the accomplishment of the results along the lines suggested. The technique described is that most generally accepted in the present-day practice of surgery and surgical nursing.

Medicine

OUR YOUNG DOCTORS ABROAD

In many respects surgery and medical science have gone ahead about fifty years as a result of the war, and that is cause for special gratification. But in one notable respect our doctors abroad have gone back about fifty years, and, shocking tho it may seem, we feel that that is cause for special gratification too.

The tendency of medicine and surgery in recent years has been toward specialization. The general practitioner has come to be regarded as more or less of an anachronism. As a consequence, the practice of medicine has become more efficient, more scientific, more methodical and businesslike, and it was inevitable that the relationship between physician and patient should become largely that between diffident strangers, one of whom has temporary need of the other. In other words, the practice of medicine has become so thoroly professionalized that, tho retaining its original humaneness, it has lost much of its humanity. It seemed to many, who recognized the fact with deep regret, that the day of the general practitioner had passed—the good old family doctor who actually was one of the family, who ministered not only to the physical but to the spiritual needs of his patients, who occupied an essential place in their every-day lives, and who, having assisted at the debut of a new member of the family, was ever after that the honored guest at christening, confirmation, marriage, burial, and all the hundred and one celebrations that marked the progress of his or her life. Progress has exacted its price, and the genial intimacy, the confiding fellowship that once existed between doctor and patient seemed to be fast disappearing.

So marked indeed has been the tendency toward specialization, so general the inclination to reject the old-fashioned standard of the family doctor, that a student who could not look forward to the selection of a specialty was likely to regard his future with the keenest pessimism. Specialization means success, both scientific and financial. It brought prestige, it made for individuality and distinction, and it often carried with it the gratifying promise of an aloof social position. These favors the aspiring student sought, and if, despite his wishes, he was compelled by circumstances to resign himself to general practice, he did so with many misgivings and much grumbling.

But if the war has taught our young doctor anything it has taught him that the favors that come with specialization are in a large sense illusory, that the *favors* enjoyed by the old-fashioned general practitioner of a generation and two ago were infinitely more human, more genial, more gratifying. The men of the Medical Reserve Corps on the other side are living in many respects like the old family doctor in relation to their fellow men. They have abandoned the detachment, the impersonal difference that has come to be one of the marks of the profession. They have been thrown in contact with a vigorous mass of young men in their best years vigorously pursuing a high purpose, a purpose which they share themselves. They have seen them suffering and dying, they have suffered and died beside them in more than one instance, and there is nothing like suffering to unite men in lasting comradeship. And this new intimacy has awakened in them a sense of

fellowship, a sense of responsibility that is more than mere responsibility for the physical well-being of the men in their care. Theirs is no longer the attitude of doctor to patient: it is the attitude of man to man. And the ties they are forming are ties which they will not readily relinquish. They have shared too much together and have lived thru too critical an epoch in their lives and in the life of their country ever to go back again to the dignified detachment which unfortunately was one of the affections of the young practitioner before the war. His experience at the front is bringing him closer to his work, but it is also bringing him closer to his fellowmen, and it requires no temerity to venture the prediction that hereafter there is little likelihood that his advance in his calling will come about at the cost of his withdrawal from social responsibility.

In this respect, then, it is gratifying to think that the war has carried our young doctors back to the ideal of fifty years ago, and many of them, who once regarded the prospect of general practice with many qualms and misgivings, will recognize in it now an opportunity to enlarge and humanize their interest in the community in which they find themselves. The associations which they are forming on the other side will be perpetuated here. They are entering too deep into the lives of the men in their care to sever the personal and intimate relations that are resulting, and, when they return after the war, they will find themselves very much in the position of the family doctor of the old school. A patient's politics, his hopes and fears, his inner life will not be a matter of indifference; and it is more than likely that the doctor will find himself once more a frequent guest at the dinner table, in the family council, part and parcel of the spiritual life of his patients. And he will have his opportunity to become once more an influence for good in the progress of the community, a man whose opinion on matters outside of medicine will be sought, whose counsel will be invited in the crises of the family's life. These are the rewards awaiting the returning doctor, and no doubt there are many candid specialists who will acknowledge that they are rewards which balance, perhaps even outweigh, those which have been conferred on him.—Am. Medicine, July, 1918.

THE ROLE OF MILK PRODUCTS IN MILK BORNE DISEASES

Too little emphasis is still placed upon the fact that the danger of the spread of disease by infected milk includes the milk products, butter, cream, cheese, ice cream, etc., as well as the milk from which they are made. Probably the danger from the latter is even greater, because so much more attention is paid to the milk than to its products. Most milk legislation is, if anything, rather vague when it concerns the milk products.

When once milk is infected neither it nor its products are affected by anything but pasteurization or sterilization. Low temperature or even freezing has little effect upon the contained pathogenic organisms. This is particularly true of the typhoid and diphtheria bacilli, which are the highest exponents of milk borne infection. There can be no doubt that these organisms can cause their respective diseases when present in milk products unless properly treated. Only safe milk, produced by whatever method, can make safe milk products. The freezing process

that is part of the manufacture of ice cream does not affect the virulence of the typhoid or diphtheria bacillus, particularly the latter. The investigation by the Public Health Service of an epidemic of diphtheria in Newport, R. I. (Public Health Reports, Reprint No. 430) demonstrated that the outbreak was probably caused by infected ice cream. Milk borne epidemics are usually characterized: 1, by their explosive character (their sudden rise and rapid decline); 2, by the fact that they can usually be traced to one or more sources of milk supply, and, 3, by the fact that mostly women and children are affected, because they are the largest consumers of milk. But it is often very difficult to trace an epidemic to its source, because among the poor no one dealer is consistently patronized.

In this epidemic in Newport, traced to ice cream, it was found that most of the cases were in adults rather than in children, contrary to what would be expected. This epidemic occurred during the hottest part of the summer when the consumption of ice cream was at its height, and it was found that only six per cent of the ice cream sold was to children under ten years of age. This fact amply explained the apparent peculiarity of a higher incidence of infection in adults. In the same city the epidemic among the military forces was present, but to a much smaller extent. The fact that the discipline and leave regulations caused a comparatively slight contact with the civilian sources of infection explains this condition. The few military cases are thought to have been from the same source as those of the civilians, but because ice cream was served but once a week to the military forces the chances of infection were lessened.

INTRASPINOUS ARSENOBENZOL TREATMENT

Beverley R. Tucker (Virginia Medical Monthly, May, 1918) believes this form of treatment justified both by experimental work and clinical evidence. It is attended with little or no danger if ordinary care is exercised in preparing the serum. Neosalvarsan should never be used. Many late and apparently hopeless cases were arrested by this treatment, and besides, relief of pain and improvement in the bladder condition weer noticed. Arsenobenzol intravenously is very efficient in superficial nervous involvement manifested by headache, slight cranial nerve palsy, and luetic vascular conditions; but in the resistant effections formerly termed metasyphilis, the intraspinal method, systematically and judiciously employed, is far superior. Ogilvie's technic is used by the author, but the dosage never exceeds 0.5 milligram, and is preferably limited to 0.3 milligram. The serum should be used immediately, or certainly not later than three hours after its withdrawal. No spinal fluid is withdrawn unless it is under considerable pressure. The patient is kept in bed without pillows and with the foot of the bed elevated for twenty-four to thirty-six hours. The treatment is repeated until the Wassermann is negative and the cell count and globulin normal. After apparent cure these tests should be renewed several times a year for a number of years; any slight positive tendency indicates further treatment. The author reports six cases, including two of early paresis, in which the treatment resulted in clinical and serological recovery. Advanced paresis is rarely benefited by any measure. Intravenous treatment is chiefly beneficial in central nervous syphilis, giving both

a positive blood and positive spinal Wassermann; often it is advisable to administer both intravenous and intraspinal therapy. Mercury and iodide should be included in the treatment of central nervous syphilis.

MANAGEMENT OF BREAST FEEDING

Howard Childs Carpenter (Pennsylvania Medical Journal, May, 1918) maintains that encouragement of the mother is of great importance. The anxious mother should be told that she has nothing to fear. If the child fails to gain in weight it should be examined carefully for any underlying condition present, such as syphilis, pyelitis, or adenoids. Little reliance should be placed on a chemical analysis of the milk, as many babies thrive on milk shown to be deficient. The breast fed baby should not suck the nipples alone but should be taught to grasp as much as possible of the areola. The intervals should be four hours and not two or three, and the best method is to feed the child five times daily—at 6 and 10 a. m. and at 2, 6 and 10 p. m. The diet of the nursing mother should remain about the same as before pregnancy. The food should be rich in calcium, cheese, milk, yolk of eggs, spinach, peas, and beans. A diet containing 2,500 to 3,000 calories per twenty-four hours is the best. If the baby has difficulty in nursing its throat should be examined, especially for adenoids. If artificial food is necessary, as determined by the weighing, it should be given immediately following the nursing and should vary with the age, size, and digestive ability of the infant. Vomiting is frequently due to handling the baby too much or having it assume faulty positions. Colic may be treated by turning the child on its abdomen or applying heat; if it persist the breast milk must be diluted, which is done by giving warm water or barley water in a nursing bottle before feeding, adding two to five grains of sodium bicarbonate to each bottle of diluent, or, if there is a tendency to constipation, five to ten drops of magnesia. When the baby is gaining in weight it should not be weaned. This is true, irrespective of vomiting, diarrhoea or colic.

THE STARVATION TREATMENT OF DIABETES

Perhaps no other form of treatment has given such good immediate results both in reduction of the sugar content of the urine and improvement in the general condition as the starvation treatment carried out according to the plan of Allen. This form of treatment is consistent with the newer theories as to the causation of diabetes, at least as regards the part that excessive eating plays in the disease.

It is no longer held that only the carbohydrates are a factor in the causation of the sugar mal-assimilation. In all likelihood the proteins are as important a factor as the carbohydrates. In the gradual return to the stationary diet, after starvation, it is possible to determine which of the two, carbohydrate or protein, is at fault, by noting the influence each has on the appearance of sugar in the urine.

It is a remarkable fact that in spite of the starvation there is practically no loss in weight. In these patients a little loss in weight is rather desirable. In the obese diabetic, who usually loses no weight under this treatment, it is impossible to eliminate all the sugar from the urine while his weight continues high. There is never any danger that

the starvation will cause acidosis and coma, as is caused by the long continued withdrawal of carbohydrate from the diet of the diabetic. In this connection it is to be remembered that the amount of ammonia in the urine is an index of the degree of acidosis. Acidosis is marked if the ammonia output reaches three or four grains in a day.

As a prerequisite to the starvation treatment the patient must be kept in bed during the treatment, and until he is sugar free. While the water intakes is not restricted he is allowed no food except coffee and whiskey. One ounce of whiskey in the black coffee is allowed every two hours between the hours of 7 a. m. and 7 p. m. The total amount of whiskey consumed during this period is six ounces and the total caloric value is 800. The patient, it must be remembered, is not really without food because alcohol can take the place of food for short periods. The administration of sodium bicarbonate, while sometimes advisable with marked acidosis, is not really essential.

The starvation treatments are carried out in two day series, never more than four day series. At the end of two days the patient is usually sugar free. Then he is allowed a diet of vegetable, cooked three times, in which the carbohydrate content does not exceed five per cent. Some fat in th form of butter may, however, be added. On the whole, the amount of carbohydrates allowed must not exceed fifteen grams. Allen has two dietaries from which to draw. One contains ten grains of protein, seven grams fat and fifteen grains carbohydrate, with a total caloric value of 200; the other contains seven grams protein, six grams fat, and fifteen grams carbohydrate, with a caloric value of 150. Allen's vegetable diet tables include string beans, asparagus, carrots, spinach, cucumbers, celery, cabbage, and onions.

This abbreviated vegetable dietary is maintained for a few days, whereupon the dietary is made gradually more generous. The proteins and the carbohydrates are added one at a time and watch is kept to see the addition of which one first causes the sugar to reappear. Whichever element it is that one must be materially reduced. A fairly generous dietary for a diabetic to maintain who has taken the starvation treatment contains fifty grams each of carbohydrate and protein and 200 grams of fat. If in spite of this reduced dietary sugar reappears, the starvation course of treatment must be repeated from time to time. However, the point to be remembered in this after-treatment dietary is that in order to maintain the sugar free urine obtained by the starvation treatment it is necessary to continue to live on a very low diet as to quantity in order that the organism may never be taxed in the assimilation and eliimnation of large quantities of food.

Surgery

TREATMENT OF RECENT GUNSHOT WOUNDS BY BRILLIANT GREEN

R. Massie (Lancet, May 4, 1918) employed 1-1,000 brilliant green in normal saline solution, 1-500 in normal saline, or 1-500 in half per cent chloretone, preference being given to the latter on account of its analgetic effect. All of the wounds were severe with extensive damage to the tissues, but all were received for treatment in periods of two to eight hours after their infliction. The application of the stronger solutions cleaned

up the wounds more rapidly than that of the weaker and there were no toxic effects observed. The application of the brilliant green was followed by staining of all damaged tissues to a much greater extent than of the healthy ones and thus aided materially in determining just how much tissue should be excised. All tissue which held the dye after the application of the 1-500 solution was cut away, with the exception of the skin, which was more readily stained. The application of the drug produced exuberant and very vascular granulations; it was painless; it did not interfere with the growth of epithelium; rapidly removed edema and inflammation; and exerted a favorable antiseptic action. The drug did not atone for the incomplete or faulty primary excision of damaged tissue, but its use aided in the secondary removal of such tissue by surgical methods.

WATERHOUSE, H. F.: THE TREATMENT OF TUBERCULOUS DISEASE OF THE LARGER JOINTS AND OF THE SPINE

Practitioner, Lond., 1918, c, 8.

Early treatment means early diagnosis. Make the diagnosis before destructive and degenerative changes have occurred. The author has great faith in Koch's new tuberculin as an adjunct to treatment. This he uses as a routine in doses from 1:20,000 mg. to 1:1,000 mg. graduated for twelve weekly injections. Those cases which withstand the drug well may be given more, even to 1:250 mg.

Bier's hyperaemic treatment is also employed in every case of joint tuberculosis below the upper arm and below thethigh.

A 10 per cent emulsion of idoform and glycerine is used to stimulate fibrosis and encapsulation of the tuberculous focus.

Tuberculosis of the hip is essentially a disease of childhood. The destructive process brings about an absorption of the head of the femur and the acetabulum with displacement of the neck backward.

The first indication in treatment is rest. Then apply weight extension to the limb in an abducted position in order to relieve muscular spasm and pain, and to keep the softened bony ends separate. After all pain, tenderness and muscle spasm have ceased, ambulatory treatment with a Thomas hip splint is employed.

Tuberculosis of the knee usually begins in the synovial membrane. A bony focus exists in almost every case in children. The focus occurs as frequently in the tibia as in the femur. A diffuse infiltration and thickening of the synovia commonly takes place. The knee tends to be flexed. The tibia may be displaced backward on the femur by the hamstrings, and rotated outward by the biceps.

The treatment in children is nonoperative because of their power of resistance, and in order to avoid any disturbance of growth in the epiphyses. In adults operative treatment is indicated even with resulting ankylosis, because resistance is poor. Weight extension is used in knee tuberculosis.

In the ankle the synovia is usually involved. Fix the foot at right angles and keep it immobilized.

If the shoulder-joint is involved in adults, keep the arm slightly abducted, the elbow flexed and the thumb up.

The characteristic deformity in tuberculosis of the elbow is partial flexion of the forearm at an angle of 130°, and

the arm pronated. To correct it, fix the forearm in such a position that it makes with the ar man angle less than a right angle and have the hand semipronated.

The primary point of attack in the wrist is the synovia. The hands and fingers are flexed and a bulbous swelling appears at the wrist. Dorsiflevion is the position for correct treatment.

In the spine, tuberculosis begins as an osteomyelitis in the anterior part of the bodies of one or two vertebrae. In adults the process is a periosteitis. Abscess complicates spinal tuberculosis more than it does tuberculosis of any other joint. Never introduce a drainage tube into such an abscess, for secondary infection always occure. Paraplegia not infrequently is found. This is always motor and due to an extradural tuberculous granulation tissue. Treatment is absolute rest in a recumbent postiion. After all pain, spasm and tenderness have ceased, a jacket of plaster of Paris or leather is used.

STONEY, R. A.: THE MODERN TREATMENT OF EMPYEMA BY ANTISEPTICS

Brit. M. J., 1918, i, 198.

Acute empyema is easily cured by simple surgical methods. Through neglect or inefficient surgical treatment the lung and diaphragm become covered by granulation tissue which by its further development into fibrous tissue renders the cavity non-collapsible and chronic empyema results. This condition is difficult or impossible to cure even by extensive Estlander or Schede thoracoplasty.

Most if not all cases can be cured without resorting to such dangerous and mutilating operations, because it is not necessary to obliterate the pleura space but merely to render its walls sterile, and this is possible by frequent washings with hypochlorite solution. The treatment is not dangerous provided a free exit for the fluid is provided.

The earlier the treatment is instituted, the sooner and more surely will a cure be obtained. The opening is most suitably made by removing one inch of the eighth rib in the scapular line. Three illustrative cases are reported.

SPENCE, T. B.: CHRONIC EMPYEMA

Long Island M. J., 1918, xii, 41.

Some surgeons claim that chronic empyema should never occur, that cure of empyema should always be effected during the acute stage of the disease by applying the proper treatment at the proper time. The author states that improved methods have been sought in the conduct of empyema cases and that there should result no permanently collapsed lungs and no persistent pleural sinuses.

Lilienthal has done considerable work in this line and outlines the management of acute suppuration of the pleura. The important objects of the treatment are: (1) exploration of the pleural cavity; (2) mobilization of the lung. He does not mention as an important factor the evacuation of the pus and drainage; however, in critical cases a few days before operation a small incision is made for preliminary drainage.

In making the exploration of the pleural cavity, Lilienthal makes an incision in the seventh or eighth costal interspace extending from the angle of the ribs to the cartilage. The ribs are spread by a retractor and the contents of the cavity are inspected. Adhesions to the lungs are separated, sacculations are searched for and emptied.

Mobilization of the lung he finds necessary in certain cases, as early as ten

days after the probable beginning of the empyema. The pleura may be covered with a grayish or greenish membranous exudate which obliterates every landmark. The chest cavity may not even show a bulging to indicate the location of the lung, as it lies compressed against the mediastinum, the spinal column, or the chest wall.

This exudate is incised, freed from the lung, and removed as far as possible. If the adhesions between the lung and the chest wall are not too strong, they also are freed. Drainage is introduced and the skin is sutured. Despite the improved methods and the greater skill and care that is exercised, one still sees cases of pyothorax that have resulted in a permanently collapsed lung, repeated accumulation of pus, or persistent sinuses.

The author has had no great success with Beek's bismuth paste.

In chronic empyema where there is considerable or complete collapse of the lung and a huge cavity lined with suppurating thickened pleura, the prognosis is very bad.

Estlander in 1877 attempted a solution of the surgical problem in these cases. Starting with the supposition that the lung was permanently disabled, he resected large portions of the ribs, thus making a flexible chest wall which could be pressed inward and be made to obliterate the cavity. Later he adopted a more complete procedure, resecting the intercostal muscles and parietal pleura and curetting the pleural covering of the lung. Schede worked out the details of such an operation a little more fully.

No further progress was made until Fowler in 1893, believing that the lungs could expand even after long compression, performed the operation of cutting away the thickened pleura lining, relieving the lung with complete success. Fowler called this operation decortication of the lung. This operation can in some cases be advantageously combined with the Estlander. Ransohoff was of the opinion that the same result could be obtained by making multiple incisions into the pleura. Hacmorrhage after these operations frequently proves serious.

The use of the blowing bottles greatly aids expansion of the lung. The patients are best up and about in the open air as soon as possible after the operation.

The author reports three cases, two operated upon with complete success and one resulting fatally.

TECHNIQUE OF SUTURING THE FRAGMENTS IN FRACTURE OF THE JAW

This is done as soon as possible after receipt of the wound, preferably within the first few days. All the sutures are placed from within the mouth, and not through the cutaneous tissues. At the first stage of the operation, the fragments are denuded to allow the passage of the wires. Local anaesthesia is preferred if possible, as it is less dangerous than general anaesthesia, which exposes the patient to the complications of broncho-pneumonia and renders the work of the operator more difficult.

Absolute alignment is not always possible; the essential is to obtain contact with reduction of the displacement. The suture wire should not be removed for three or four weeks, a delay necessary for beginning consolidation. At this time, a chin cup may be employed as adjuvant, which would not have been possible at the first. The apparatus employed should give upward and forward pressure to counterbalance the action of

the depressors. When cicatricial adhesion of the tissues tends to occur, a prosthetic piece is indicated.

This method is only applicable in cases where there are extensive fractures of the jaw, lesions of the soft tissues, and total or partial absence of the teeth. There is no need to have recourse to it in cases less grave. Even when complete consolidation is not obtained, the improvements which result justify the measure, for:

1. The power of regeneration of the bone is very great and experience has shown that the probabilities of union are good when the fragments are replaced in good position and in contact.

2. Even if union does not follow, future grafting operations are facilitated.

3. By the rapid fixation of the fragments, the facial contour is notably preserved.

4. Future autoplastic operations are likewise facilitated.

SELECTION OF ABDOMINAL CASES FOR OPERATION

Owen Richards (British Medical Journal, April 27, 1918) says that in military wounds of the abdomen the value of early operation and the best technic are fairly well agreed upon, and the mortality is fairly constant. There is, however, a material difference between successful cases and profitable cases. The only profitable cases are those in which an otherwise fatal injury is cured by operation, and it is upon the proper selection of cases for operation that the proportion of profitable cases depends. Even if the operation does no harm, it is a waste of valuable time to operate upon cases which would recover equally well without operation, and it is a similar waste of time to operate upon such as offer no hope of recovery even after operation. In both instances we are depriving other men of profitable operations. Patients with wounds limited to solid viscera, with no progressive hemorrhage and no large retained missile, seldom need operation, and those with other grave injuries of head, chest or extremities are usually not fit to withstand operation. In the others it can usually be determined that the abdomen has been penetrated, but the nature and extent of the abdominal injury remains unknown, hence the decision regarding operation must be based upon those facts which can be determined. While no rule can be laid down with certainty, the proportion of profitable operations is very high in those operated upon within the first twelve hours; the same is true to a less extent for those treated in the first twenty-four hours, but after this interval the proportion is very small, since most who then survive would have lived without operation. The pulse rate is the second guide of value, for those with a pulse of 120 or more have less than half the chance of survival of operation of those with a pulse below that rate. Those with rapid pulse should be operated upon, however, if their condition is as good, as it is likely to be, if they have a chance of recovery, and if the time taken does not prevent the proper treatment of more hopeful cases. In times of great pressure the men should be selected and arranged in the order of the likelihood of the operation's being profitable, if the maximum surgical help is to be given to all. Finally no surgeon should be allowed to do this work who is not rapid and gentle in his technic.

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C. R. ENSLOW
J. E. RADER, } Assistant Editors
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PAPER READ BEFORE STATE MEDICAL SOCIETY, SURGICAL SECTION, AT MARTINSBURG, W. VA., BY THE CHAIRMAN, C. S. HOFFMAN, M. D., F. A. C. S., OF KEYSER, W. VA.

It is not my intention to burden you with a scientific paper, as these will be presented to you by abler men at this meeting, but owing to the fact that Dr. Butt, our worthy Secretary of this Surgical Section, in getting up his program for this meeting referred to me as one of the pioneers of surgery in this state, the idea occurred to me to mention just a few of the conditions that prevailed when I studied and began the practice of medicine. If I should digress just a little and go back of this date I ask your pardon.

I took my first course of lectures at Louisville, Ky., in 1873 and 1874, and there had the privilege of listening to the teachings of the Yandals, who were masters in medicine and surgery, especially Dr. David W. Yandal. In March, 1877, I received my diploma from Jefferson, in Philadelphia, and from that day to the present I have practiced medicine practically every day, my only recreation being when away attending the medical societies. To me medicine has been a jealous master, for it seems to me that very little of my time has passed which has not been used in my profession, as I have had no side issues. It has been said that too much application "makes Jack a dull boy," and I sometimes feel that probably I would have been better profited had I taken more recreation. That I still work is evidenced by the fact that only yesterday, besides giving my attention to twenty odd patients in my hospital, and doing two tonsilectomies and adenoidectomy, I visited fifty-one families in our town besides doing some office work. Consequently I feel that while I may be counted a pioneer in surgery in West Virginia, I am as young as the youngest of you gentlemen when it comes to hard work, and am able to verify the statement made by Prof. Aitkin Meigs when I attended lectures, "that a man's age should not be measured by his number of years." When I graduated in medi-

cine only two terms of about five months each were required. Examinations were oral and every aspirant was required to write a thesis on some medical subject. I selected the subject of anæsthesia. At that time every one thought that the credit of this discovery was due to Morton and Simpson, but information in medicine as well as all other subjects has advanced, and had I the privilege of again writing this thesis I possibly would ascribe the honor to Dr. Crawford Long. But more earnest research demonstrates the fact that anæsthesia was practiced centuries previously, as we have good authority in making the statement that the first surgical operation ever known to be performed was done under anæsthesia, and that the operation was for a resection, and that the name of the patient was Mr. Adam. The bible tells us that the Lord caused a deep sleep to fall upon Adam and he took from him a rib and constructed a human being. You men who do bone transplantion today, can you beat that? Several years ago at a medical meeting I heard the distinguished Dr. Howard A. Kelley say in an address, "that the subject of Gynecology was then a rounded profession," but since that time Dr. Kelley has revised his work and I am positively sure methods he then employed have been materially improved upon. It is marvelous what strides medicine and surgery have made. Possibly it may not be amiss, but interesting, to some of you should I mention some of the treatments in vogue for controlling Uterine Hemorrhage in the earlier centuries, and we can excuse the woman for touching the hem of Christ's garment if possibly she might be cured of her flow. Rabbi Jochanan says, at this early period the plan of treatment was: Take of Gum Alexandria, of Alum and of Crocus Hortensis, the weight of a zuzee each, let them be bruised together and given in wine to a woman that hath an issue of blood. But if this fail, take of Persian Onions nine logs, boil them in wine, give it to her to drink and say; arise from thy flux. But should this fail; set her in a place where two ways meet and let her hold a cup of wine in her hand, let some one come up behind her and affright her and say, arise from thy flux. But should this do no good, take a handful of crocus and a handful fenu-greek, let these be boiled and given her to drink and say "arise from thy flux." But should this fail, dig seven trenches, burn in them some cuttings of vines not yet circumcised, (vines not four years old), and let her take in her hand a cup of wine and let her be led to this trench and set down over it, and let her be removed from it and set down over another and so on. But this is a digression gathered only from reading and not from personal observation. It is mentioned here only to show how we have advanced.

But getting back to my subject; not only had I the privilege of hearing the Yandals, but also of learning from such instructors as Dr. S. D. Gross, Dr. J. C. DaCosta and the elder Pancoast. Men who were towers of intellect and had national reputations as teachers. Prof. S. D. Gross was acknowledged as the father of American surgery and his text book on surgery and pathology then had no superiors and few equals. His whole life and influence was one of inspiration. In entering upon my practice as a physician I often lamented that I could never be able to do the things that Prof. Gross would do, but today, the merest tyro in surgery is accomplishing feats that would have staggered Dr. Gross. At that time the union of a

wound by first intention was considered a dream and we were lectured to for weeks on the pathology of inflammation and laudable pus, and taught that laudable pus was a necessity for the proper healing of wounds; that saneous or icherous pus denoted an unhealthy or an unfavorable condition, and in all operations the laudable pus was to be encouraged.

The only abdominal operation I ever saw performed while a medical student was by Dr. Gross, and it was the ligating of the external iliac artery for an aneurism of the femoral. The only antiseptic preparation made, was a request from Prof. Gross that all who assisted him in the operation should wash their hands, which they did, at a dirty wash bowl fastened in a small recess in the side of the wall of the arena of the ampitheater and all dried their hands on the same towel fastened on a roller by the side of the basin. The only gown worn by the assistants was a jacket such as is now worn by barbers and the gown worn by the operator was made of some black material which, when once put on, was not removed until the entire operations of the morning were completed. At that time everything was sewed with silk, and so afraid were they that the knot would slip that it was waxed with bees wax, and one ball of bees wax answered the purpose until it was well used up. If it should fall on the floor and roll around the arena, as I have seen it do, its usefulness was not in the least impaired At that time post operative hemorrhage was the thing to be dreaded and one end of all ligatures tied around blood vessels were to extrude from the wound so that they could be gently pulled upon at the ninth day and every day thereafter until they came away. Dr. Joseph Hearn, who recently died, was anæsthetist to Prof. Gross and his being in this connection with this distinguished surgeon gave him much prestige. It was said of Dr. Hearn that up to his death he was one of the finest diagnostitians in Philadelphia, solving some of the most difficult surgical cases as if by inborn intuition. It has always been my impression that this intuition was acquired by his association with Prof. Gross. For at that time men were observers and not mechanical or microscopical diagnostitians. The chief assistant to Prof. Gross was Dr. Barton, and all the extra regalia he wore at an operation was a white jacket, such as barbers wear nowadays, and all the pins, needles, ligatures and sutures required for the operation were attached to the lapel and breast of that coat, the pins and needles being stuck in the coat and the silk looped over them. It was the usual custom in threading these needles to pinch the thread between the teeth to make it go through the eye of the needle easier.

At that period no such a thing as a trained nurse was known and when two aspiring female esculapians happened to come into the ampitheatre of the Pennsylvania Hospital during a clinic of Dr. Thos. G. Morton, his clinic was suspended until the janitor could be hunted up to go and request the ladies to retire, as it was against the rule of the hospital to allow the presence of women. A couple of years ago I visited this old institution and saw what marvelous changes had been wrought. I could scarcely realize it was the same institution.

At that time no one ever heard of a disease such as appendicitis, but we were well lectured to upon the subject of typhlitis and perityphlitis and the diagnosis of each, but the idea of an operation for appendicitis had not yet dawned.

It was a fact that when the abscess of a perityphlitis had so bulged to the front that an incision through the skin would practically reach it, we were instructed in rare cases to make an incision and let out the pus. When Dr. Thos. G. Morton of Philadelphia, performed his first operation for appendicitis it was counted a marvelous one and we cannot help being amused when comparing the literature concerning the advisability of the operation then with that of the present. When the writer first began the practice of medicine appendicitis did not appear as common then as now, for when probably the first operation for appendicitis performed in the state of West Virginia was advised, a physician of large practice hearing of the proposed operation, requested to be present, stating that he had been a practitioner of medicine for over thirty-five years and at that time was not sure he had ever seen a case of appendicitis. This same physician some time later requested the speaker to be present at an operation where he expected to remove an ovarian tumor and wanted everything to be thoroughly aseptic. At the time of the operation no one wore a gown, and the chief assistant, a man noted at that time as a surgeon, used a towel to wipe his hands upon during the operation and would throw this towel over his shoulder when not needed in order that he might have it handier when necessary. This was supposed to be an up to date operation and thoroughly aseptic. About this time the controversies about aseptic surgery were looming up. Lister formed the idea that suppuration following operations was due to germs and by preventing the entrance of germs into the wound while operating there would be no suppuration. In other words a surgeon could do unclean surgery and the case would progress favorably providing the germs could be kept out. Consequently the carbolic acid spraying apparatus was used to spray a solution of carbolic acid over the wound during the operation. About the same time Tait appeared with the idea that if one would do clean surgery it was not necessary to prevent the entrance of germs; that they grew only on unclean tissue; if the parts could be kept clean there would be nothing for the germ to thrive upon. Tait used only soap and clean spring water and his results were marvelous.

It is a very common matter at the present to do abdominal operations for the removal of ovarian tumors before medical classes in the large ampitheaters, but it remained for Dr. E. E. Montgomery, of Philadelphia, to do the first successful ovariotomy in an ampitheater before a medical class in Philadelphia, May 17, 1879.

When I began the practice of medicine hospitals in the state of West Virginia were practically unknown, now they are scattered all over the state. Major operations were then performed at the patient's home or at the doctor's office. I remember two amputations at the shoulder for crushed arms in which I did the amputations at my office, my assistant being the local druggist who gave the anæsthetic. Both of these patients with wounds healed were able to be up and down town, one in seven days and the other in nine days. I did a successful hip joint amputation at the home of the patient under the most unfavorable surroundings. I have successfully amputated legs in the dirty waiting room of the railroad stations, and all appendiceal operations and laparotomies were done at the patient's home. These were some of the conditions which the physicians

were up against in my early career and I am glad to say they were equal to the emergency.

I note on the program of this meeting a paper by Dr. Clovis, of Terra Alta, who has charge of our State Hospital for consumptives. In the year 1900, when president of this society, I advocated the erection of a State Hospital for consumptives. Its consummation seemed like a far-off dream, but from my suggestion and urgency of the matter a committee was there formed which never let up on the legislature until the end was accomplished, and as th result, West Virginia can now feel proud of her tubercular sanitarium.

While I have referred to some things not relative to the outline of this paper and possibly to myself as I should not have, it has been marvelous to me as I realize some of the many advances that have been made in medicine and surgery during my career as a physician.

SANITARY MANAGEMENT OF THE COMMON INFECTIONS.

By S. L. JEPSON, A. M., M. D., Charleston, W. Va.

Before proceeding to discuss the topic named, permit me to present briefly some well recognized facts in relation to the causation and spread of the common infectious diseases. Each of these is dependent for its origin upon a specific microorganism capable of reproducing itself in the body, as an scarlatina, variola, etc., or out of the body, as in typhoid fever, cholera, and probably diphtheria. These diseases therefore do not arise *de novo*, although it may not be possible to determine the exact origin of every case.

The poison of the disease, whether it resides in throat, lungs, intestines or skin, is minutely divisible and diffusible in the atmosphere about the patient. It may in most cases, therefore, be transferred from the patient to another susceptible person, either by direct contact, or without contact or even close proximity, if such person inhale infected air; and air is most apt to be infected by droplet infection, that is, by the coughing or sneezing of the patient. The disease germs may also enter bed and body clothing, furniture, books, toys or other articles in the sick room, and render these capable of conveying infection to persons coming near or handling them. The danger from such infected things may continue indefinitely, for a number of disease germs have great tenacity of life, and may survive for many months, especially in clothing that has been packed away. Another fact sometimes overlooked should be emphasized, namely, that dogs, cats and birds, if permitted in the sick room, may have hair or feathers infected, and thus serve as carriers of disease. Some of these also are susceptible at least to diphtheria, and may convey it directly to the human family. The common house flies may also carry the infection of smallpox, typhoid fever, and other diseases. Ticker, of Berlin, has isolated typhoid bacilli from bodies of flies caught in a house where eight cases of typhoid fever had occurred, and his experiments showed that "flies fed with the typhoid bacilli are able to carry the microbes to objects with which they come in contact for as long as twenty-three days after the feeding." (Jour. A. M. A., May 16, 1903.)

The germs of disease may be inhaled, entering the system through the lungs; they may lodge in nose or throat, there gaining an entrance to the system; or they may enter by way of the alimentary canal, and in exceptional cases through

surface wounds and abrasions. Some infectious diseases, as variola and scarlatina, may infect the fetus in utero through the mother's blood.

We must recognize the difference in the susceptibility of persons to the infections; and the variability of the poisons in virulence and diffusion is marked in different years. I have seen three young children in a family escapt scarlatina, although the fourth had a malignant attack, and separation of the children of the family was impossible.

Susceptibility to diphtheria and the exanthemata is probably greatest from two to seven years, and it rapidly diminishes after the tenth year of age. Hence the necessity of guarding the young against these diseases, for it is by no means necessary, as many of the laity are apt to think, that every child must at some time contract so-called children's diseases.

Some families seem especially prone to these infections. Other things being equal, those are most susceptible to diphtheria and perhaps scarlatina, whose mouth, throat and nose are in an unhealthy condition from defective teeth, enlarged tonsils, adenoids, and general catarrhal states.

Defective sanitary conditions, as imperfectly trapped house drains with street connections, cellars dark, damp and containing decomposing organic matter, badly ventilated and moist places under floors, especially places where sun and daylight never enter, and where refuse is permitted to collect, leaking or overflowing privy vaults —conditions so often found about the homes of the ignorant and improvident, too often, alas, by fault of grasping landlords—all these afford conditions favorable for the development of the germs of some of the infectious diseases.

Our schools, unfortunately, are often propagating places for diseases. Pupils are admitted to or continue in their classes with mild, unrecognized scarlatina, diphtheria or other disease, or too soon after recovery, with persons or clothing still infected, return to school. As a result of this carelessness, there is in every large community annually a marked increase in the number of infectious cases after the September resumption of school work. Patients with pertussis are rarely restrained in their movements, mingling daily with other children, and yet this disease is the cause of a large mortality from complicating bronchitis, pneumonia and meningitis, especially in the very young. In London, says Dolan, it causes one-fourth of the annual mortality of children.

The presence of the microbe alone often fails to cause disease. People go about with the diplococci of pneumonia in their respiratory tracts, but without pneumonia. Living cholera vibrios may take up a residence in the intestines without producing cholera. The Klebs-Loeffler bacilli are not unfrequently found in healthy throat.s Tubercular bacilli may long remain quiescent in the lung. Poor food, reduced general health, bad sanitary surroundings, any condition that tends to impair the vigor of the body cells and weaken their resisting power, will aid in preparing the body for the invasion of disease germs, and active disease may be the result.

This brief summary of familiar facts touching the etiology of acute infections affords a foundation for some suggestions as to the sanitary management of the more common infectious diseases —suggestions for which I can not claim the merit of novelty.

From remarks already made, it follows as a necessary consequence that

one stands the best chance of escaping disease who most nearly obeys the laws of hygiene. He should at all times maintain the best possible sanitary surroundings. He should live a pure and virtuous life, and let temperance mark both eating and drinking. Thus he may be able to secure and maintain the highest degree of bodily vigor.

Other suggestions relate to sanitary measures that should be enforced when infectious disease occurs. These are necessary not only during the patient's illness, but also after his recovery or death.

First: The best of all sanitary measures is the prompt removal of all infectious cases to an isolation hospital. I have had the management of outbreaks of smallpox both without and with a suitable hospital. The saving in expense by the use of a hospital can scarcely be computed. The safety to the community is immensely increased. The diminution in the wear and tear of the health officer's nervous system, and the consequent peace of mind that comes to him when he gets his smallpox patient away from a crowded, unsanitary neighborhood into a comfortable, well-managed hospital, must be experienced to be appreciated at their full value.

But people are not yet trained to send their infected children to a hospital, for isolation hospitals, except for variola, are not common; but were a good one established in every large community the patronage would grow, for hospital treatment of infectious cases means safety to the community, safety to the family, better care of patient, and certainty all things considered, greater economy.

Second: If the patient must be treated at home, remove all susceptible persons from the house or to a distant part of it, when possible, and keep them from contact with other persons for a proper time. Put the patient in an isolated upper room, from which carpets and all unnecessary furnishings have been removed. The fewer articles that remain, the less work in cleaning and disinfection and the less danger of conveying infection to others. No one should be admitted to the room except the nurse or other necessary attendant. She should wear a cap to cover the hair, and a long outer garment to cover the clothing, and these should be removed when it is necessary to leave the room, and on such occasions she should avoid unnecessary contact with other persons. Nor should we, as physicians, neglect any precaution that may be necessary to prevent the possibility of conveying infection. I can not but think that every physician attending an infectious case, such especially as diphtheria or poliomyelitis, will secure for himself better protection and be less apt to become a disease carrier, if he will always, in the presence of the patient, wear a gauze mask over his nose and mouth. The use of a rubber or other outer garment by the attending physician accomplishes nothing except the protection of his clothing from infection. The sick room should be constantly well ventilated, and at least twice daily all windows should be widely opened, the patient being well protected. The purpose of this is to diffuse and dilute the poison, and to get the full benefit of renewed supplies of oxygen. Nor should the germ-destroying power of sunlight and diffuse daylight be forgotten. When the nature of the case will allow, these may be taken advantage of. Daily cleaning and disinfection of all articles used about the patient should be secured. Llewellyn Eliot advises the constant evaporation of turpentine over

a water bath, so that the vapor fills the room. J. Lewis Smith adds to a quart of water in a wide pan, and keeps at the simmering point, an ounce of this mixture; carbolic acid, one oz., eucalyptus oil, one oz., turpentine, eight oz. The daily wiping of floor and furniture with a cloth saturated with a strong bichloride solution is perhaps more efficient than either of these.

During the treatment the house should be placarded with the name of the disease, and entrance should be forbidden on penalty of a fine. In the case of smallpox, a guard is also required in some cases, for we should never lose sight of the ignorance and vileness of some of our race, and their absolute indifference to the spread of disease.

While I believe that placarding will lessen the danger to a community, we cannot overlook the fact that many mild cases go unrecognized and hence entirely uncontrolled, and thus diseases spread in spite of the best directed efforts for their suppression. This has been notably true during the recent prevalence of smallpox in extremely mild form.

Third: In the eruptive diseases, the patient's person should be kept smeared with antiseptic oil or ointment. This acts locally by destroying the disease germs, and also mechanically by preventing their diffusion in the atmosphere, especially during desquamation. Antiseptic cleansing of the patient's mouth and nostrils should also be resorted to at stated periods, and all discharges from those parts should preferably be burned, or with those from stomach, kidneys and bowels be received in a vessel containing a disinfectant solution, and allowed to remain there for several houre bsfore emptying.

Fourth: It is scarcely necessary to say that in case of smallpox every member of the patient's family, all near neighbors, and every person who has in any way been exposed, must be promptly searched for and vaccinated, and then kept under observation, but not necessarily isolated, for sixteen days, or until a successful vaccination has been secured.

In diphtheria cases, especially where complete isolation of the sick can not be enforced, immunity for the well can be established by the administration of a proper dose of antitoxin. The New York Board of Health reports 16,000 immunized injections to exposed persons, and in the thirty days following but one-half of one per cent (79 persons) were attacked, and of these but one died.

During the prevalence of diphtheria the nose, mouth and throat of all children should receive special attention, for healthfulness and cleanliness of these parts will materially aid in securing immunity from infection.

Medical inspection of school children has resulted in much good, but as this cannot often be secured, the principal of every school should be taught how to tell a healthy from a diseased throat, and in the presence of an epidemic or a general prevalence of diphtheria or scarlet fever, he should be required to daily examine the throat of every pupil, and all should be sent home who exhibit evidence of disease. The family physician can correct any error he may make.

Fifth: The patient dead, the body should be buried privately, quickly, and with every sanitary precaution.

The patient well, he should receive several disinfectant baths, especial attention being paid to the hair. Receiving clean clothing in another room, he may safely mingle with the well.

Everything that can be washed should

be immediately boiled, or put to soak in a disinfectant solution. Useless articles should be burned. Pillows and mattresses can probably not be completely disinfected. In smallpox cases they should be burned, unless they can be subjected to superheated steam disinfection. In other diseases they should be wet with formalin, and afterward be subjected to fumigation. This may be preferably done with a formaldehyde generator in a room made as nearly air tight as possible. It may also be safely done with sulphur dioxide. It cannot be safely done by burning an indifferent quantity of sulphur in a dry room indifferently closed. Everything must be freely exposed, the room tightly closed and well steamed, and then sulphur burned in the proportion of not less than four pounds to each 100 cubic feet of air space, and the room kept closed for twenty-four hours. In smallpox cases it is advised to have floors and furniture washed with a bichloride solution. The scarlatina germ is believed to be harder to kill than that of smallpox. Why not exercise the same vigilance against it and other infections as against variola, which has in the aggregate a much smaller mortality, indeed in recent years almost none. As to fumigation, while we have above advised that clothing be fumigated, I may say that sanitarians have practically abandoned general fumigation in almost all infections, and if daily cleansing and disinfection are used as here advised, it is rarely necessary.

To carry out the suggestions here made is troublesome and more expensive than a do-nothing policy. They will. therefore, not often be rigidly carried out, and only when the sanitary control of all acute infections is made the duty of municipal administration. And we must recognize the fact that sanitary administration has not kept pace with scientific knowledge. This is no doubt largely due to the evil influence of politics, and to the gross lack of appreciation by our authorities and people, of the unselfish efforts of the medical profession, which has always been ready and anxious to rise above personal interests, and to lead in any movement for the protection of the people from disease and the betterment of their physical condition.

Time is not permitted me to adequately discuss the prevention of cholera, typhoid fever and tuberculosis. The first occasionally sweeps over the world, carrying off its thousands, as it did some years ago in the far east; the second, like the poor, is always with us, attacking its victims in the vigor of youth and young adult life; the third is humanity's most destructive enemy, to which is attributed one-seventh of the world's mortality, and which is said to destroy four and a half times more lives than smallpox, typhoid fever, scarlatina and diphtheria combined. It is hoped that valuable suggestions may be made touching the sanitary control of these diseases by the speakers who shall discus this paper.

As yet I have made no mention of quarantine as a preventive measure. No one can doubt that a rigid quarantine is a valuable preventive of disease, but the proper place to enforce it is at the house of the patient. If th disease is properly controlled there, we need no other quarantine. When enforced between towns and cities it is destructive to commercial interests, and should only be resorted to under very exceptional circumstances. In 1895, because of the existence of a few cases of smallpox, Wheeling was cut off from the outside world by quarantine lines that were based upon gross ignorance combined with downright selfish-

ness of outside communities. I believe in no such interference with the operations of legitimate trade. In case smallpox breaks out in a camp of miners, lumbermen, or railroad workers, where no intelligent control is exercised over its progress, quarantine should be rigidly enforced. But in settled communities, with an intelligent, active medical officer of health in charge, smallpox is usually easily controlled, and there will rarely arise any necessity for other than house quarantine. No other disease from whose invasion our state is liable to suffer demands other quarantine than that at the point of infection.

The suggestions of this paper may be summarized in these words: Vaccination, isolation, cleanliness, ventilation, disinfection.

I can not close without expressing some surprise that physicians persist in permitting unrestricted contact of the well in a family with the sick pending a diagnosis. Thus many children are often freely exposed to disease that develops as scarlet fever, diphtheria or poliomyelitis, and at the most infectious stage of these diseases. The rule of practice should be to exclude from the sick room all persons, and especially children, until a definite diagnosis has been made. Thus very many cases of serious illness may be prevented, with their attendant expense, suffering and sorrow if death should result.

MEDICAL SCIENCE AND THE WORLD WAR.

By AARON ARKIN.

(Read at Annual Meeting West Virginia Medical Association, Martinsburg, October, 1918.)

When the history of the world war is finally written it will be found that medical science has played a great part in the struggle, a role unique because it is the only science which has not been utilized in the destruction of human life. Its benefits have been shared alike by all the combatants for conservation and not destruction. Medical science has protected twenty millions of fighting men against the great scourges of previous wars—typhoid fever, dysentery, diarrhœa, smallpox, typhus fever, tetanus or lockjaw, malaria, and cholera. Modern aseptic surgery has enabled over 80% of wounded to be returned to the battle front, and in an incredibly short period of time. These results we owe largely to the developments in bacteriology, the discoveries in the cause and transmission and prevention of communicable diseases.

Pasteur's work on fermentation and decay and the bacterial origin of disease, and Lister's discovery of antiseptic surgery have made possible the marvelout developments in plastic surgery. Before Lister, surgeons never dared open the head, chest or abdomen. Now operations are done which were never dreamed of in the past. In our own civil war 95% of abdominal gunshot wounds resulted fatally; in the present war with much more severe injuries and infections only 45% succumb. Before Lister 66% of compound fractures were fatal; today less than one per cent. Plastic surgery has become a fine art and the successful transplantation of tissue is being practiced in the base hospitals of Europe, where the brutalities of man are being ameliorated by skillful operation. Preservation and even growth of tissues in vitro offer possibilities of even greater miracles.

Along with the carnage of the present world struggle are many blessings. Besides the promotion of national unity,

subordination of personal comfort to national welfare, the development of habits of thrift and conservation, reduction or prohibition of the use of alcohol, the fight for democracy will cause great developments in the field of preventive as well as curative medicine and will emphasize as never before the importance of public health for national safety. We are already brought face to face with the seriousness of a high percentage of physically defective men in the most favorable age group, 21 to 31.

The Provost Marshal General's recent report shows a rejection rate in all local boards of 29.11% to which must be added about 5 to 10% more rejections at the cantonments. Of 2,510,706 men examined by local boards, 730,756 have been rejected. Many of the impairments are of a preventable or curable nature. About 60% of impairments are due to eye defects, decayed teeth, malnutrition, hernia, etc., mostly the result of ignorance or neglect. Is it not high time for universal education in child hygiene, universal physical training, and periodic physical examinations? must we not in the present crisis reduce to a minimum the loss of life from preventable diseases, which now constitute 30% of all deaths, and avoid unnecessary human waste in industry. Shall we not follow the example of New Zealand and by education of future mothers, intelligent obstetrical care, and a pure milk supply, reduce our infant mortality from 200 per 1000 births to 50, the lowest rate in the world? Shall we not consider seriously the fact that in France, England and the United States there has been a steady and rapid decline in the birth rate affecting those best able socially and economically to bear and maintain a good sized family? Let us examine the facts. The birth rate in France for the past ten years has been below the death rate. Its population's average age is therefore considerably higher than in Germany or England. At the beginning of the nineteenth century the population of France was 29, German Empire 23, and United Kingdom 18 millions. A century later we find in Germany 65, United Kingdom 45, and France last with 39 millions. France has had a high infant mortality rate, a high tuberculosis and typhoid mortality rate.

In England we find also a decreasing birth rate, chiefly among the upper and middle classes. In our own country we find a birth rate of 25 per 1000, with a death rate of about 15, a healthy rate of increase of about 1% annually. This, however, is due largely to foreign born increase and immigration. The native stock is showing a steady decrease.

I wish to present in the time at my disposal the work which is being done by medical science for the relief of human suffering and the prolongation of human life during the present war, and also to submit some of the new medical problems which require solution. Never before has the medical officer been confronted with such a gigantic task of applying all the knowledge of disease prevention to millions of soldiers. Never before has it been so important that the health of the civilian population be protected as well. Trench warfare has been accompanied by the discovery of diseases hitherto unknown, such as trench fever, trench foot, trench jaundice, war nephritis, shell shock and war deficiency oedema.

COMMUNICABLE DISEASES

Of the communicable diseases typhoid fever, the greatest danger in previous wars, has been entirely prevented by the use of that great discovery by Wright of England, typhoid vaccination; by puri-

fication of all water supplies, disposal of feces, trench sanitation, isolation of typhoid carriers, care in handling all food. In our civil war there were 79,462 cases of typhoid with 29,336 deaths. In the Boer war there occurred 58,000 cases and 8,000 deaths. The total deaths from all causes was 22,000. In the Spanish-American war there were 20,738 cases with 1,580 deaths among 107,973 men. Eighty-six per cent of all deaths were from typhoid. In the entire British armies in France, Salonica, Egypt and Mesopotamia (over 5,000,000 men) there have been only 4,600 cases up to November, 1916, and only 90% of the saldiers were vaccinated. If the rate were as high as in our Spanish-American war we might have expected over a million cases. In our own new army among 750,000 men during four months we had but 119 cases.

Among the last million men vaccinated there have been only seven cases of typhoid. Typhus fever, a disease more serious than typhoid, and prevalent in Serbia, Russia and parts of Austria at the beginning of the war, has now been completely controlled. The discovery that the disease is spread by the body louse has been followed by delousing, destruction of all vermin, and disappearance of this dread disease. Its cause was discovered about two years ago by a young physician at Mt. Sinai Hospital in New York City. Vaccination with the baccillus of Plotz seems to protect against infection.

There has not been a single case of smallpox, for which every man in our army has been vaccinated. Dr. V. G. Heiser, Director of Health of the Philippine Islands has vaccinated over eight million without a death. In these islands there were previously 25,000 cases with 6,000 deaths annually. And still we hear of the dangers and uselessness of vaccination.

Tuberculosis is one of the important war diseases. Undernourishment, exposure, fatigue, overcrowding, have caused a great increase in this disease among the troops and civilian populations. When we realize that 95% of adults have become tuberculized when they reach the age of thirty and that perhaps 1% of these have active tuberculosis we can see the seriousness of the tuberculosis problem.

In France there was gathered together on a day's notice an army of three millions to fight at once. No physical examinations, or elimination of the tuberculous was possible. This danger was but a trifle compared with the much more formidable and immediate danger of France being conquered. The world knows how this danger was averted by the victory of the Marne in September, 1914.

A very large number of latent, incipient or arrested tuberculous men were mobilized. Many of these have developed active tuberculosis in the trenches. In 1915, 85,000 soldiers returned home with active tuberculosis, by 1917 about 150,000. Herman Biggs, Commissioner of Health of New York State, who was sent to France by the Rockefeller Foundation, has found the tuberculosis situation in France a very serious one. Many of the two millions or more of French people who remained back of the German lines were deported to Germany, and are now being returned through Switzerland. Of the first 20,000 returned 25% had active tuberculosis. Thirty to 45% of the exchanged French prisoners are suffering from tuberculosis. France is paying a high penalty for neglect of public health activities before the war. Her tuberculosis death rate was three to five

per 1,000; England's only one. If the war ended today France would have 500,000 tuberculous cases to care for, and it has facilities for about 15,000 beds, with few trained nurses or social service workers.

England's situation is very different. With its efficient public health organization and administration and careful examination of recruits it has only a few thousands of cases in five millions of soldiers.

The discovery of a cure for tuberculosis would be medical science's greatest contribution to humanity.

Pneumonia is probably second in importance among soldiers at present. Our knowledge of this disease has been greatly increased in the last few years by the work of Cole and others. The discovery of different types of pneumococci by agglutination tests; the production of a specific serum for type I; the recognition of the disease as a contagious disease spread by infectious droplets from patients and germ carriers of type 1 or 2 or 3 pneumococcus, have been very important. Of 108 cases caused by type 1, treated at the hospital of the Rockefeller Institute, there have been but eight deaths; none in the last 33 cases treated with the serum. The spread of the disease is now being prevented by isolation of all cases and carriers of types 1, 2 or 3 organisms, sterilization of sputum, the use of face masks on patients, nurses and physicians attending them. Ethyl-hydrocuprein, a derivative of hydroquinine is a very effective germicide and valuable as a wash or spray for mouth and nose. It is used in 1 to 10,000 solution.

Finally, Lister in South Africa, has been able to prevent the disease by vaccination with a vaccine containing the different types of pneumococci.

Other forms of pneumonia have occurred in the camps, chiefly a hemolytic streptococcus interstitial bronchopneumonia described by Cole and MacCallum. This type frequently follows measles, sometimes scarlet fever. It may be complicated by empyema and nephritis. For its prevention some have recommended streptococcus vaccination. Avoiding acute colds and the infection with measles are not important. This can be accomplished by isolation of all cases, proper ventilation, heating, avoiding over-crowding, and proper clothing.

Measles and scarlet fever, the causes of which are yet unknown, produced considerable illness in our training camps, until men were separated for a period of two weeks after arrival. This effectively checked their spread. These diseases are prevented by early diagnosis, isolation and quarantine, disinfection of all secretions, and use of face masks. The healthy carrier is not so common, and can not now be recognized.

Epidemic meningococcus meningitis has taken a considerable toll of lives among our forces abroad and also in a few of our training camps. The disease can be easily diagnosed by spinal puncture and finding of the meningococcus, which is also present in the blood in a high per cent of cases early in the disease. Avoiding over crowding in barracks, early diagnosis and strict isolation, recognition of germ carriers by cultures from mouth and nose of all exposed persons, and the use of 0.25% solution of chloramine-T with atomizer, will check this disease. Vaccination with dead meningococci of those exposed should be tried. Treatment should be by intra-spinal injection of anti-meningococcus serum (Flexner serum) as nearly as possible. This serum has lowered the mortality from 80 to about 15%.

Venereal diseases, gonorrhœa and syphilis, cause a greater disability list than any other diseases. Time will not permit a full discussion of this great problem. To maintain the full efficiency of an army the diseases must be checked. So serious is this problem that the government has enforced strict regulations in all cantonment zones, tending to suppress prostitution. Most state boards of health have issued regulations requiring reporting of all cases under a registered number, the establishment of free clinics and dispensaries for diagnosis and treatment, furnishing printed instructions for preventing spread of diseases, the necessity of treatment until cured, etc. The health departments have undertaken the investigation of all cases and examinations of all persons suspected of having venereal diseases. Quarantine until non-infections has been established. Druggists have been forbidden to prescribe for venereal diseases. The giving of certificates of freedom from venereal disease is forbidden. I have always been convinced that education by well qualified persons will solve this great problem of modern civilization and establish a single standard of morality.

(*Continued in Next Issue*)

WHEN YOU HAVE THE "FLU."

By MARK C. KYLE, Charleston, W. Va.

After a restless night you get up some morning with your bronchial tubes all stopped up, with a lot of soreness in your chest and a real sore throat. You have a very troublesome hacking cough which attracts the attention of your friends. So, every few minutes you ar bothered by someone asking, "Got the flu, ain't you?" or some question of like character. To one and all you reply "No, I've just got a cold. I've felt it coming on for several days," though in fact you know this is not true. Of course you do remember sneezing some yesterday, but what of that? There are so many things that might make you sneeze. A little cayenne pepper in the nostrils, for instance, or a thousand other inconsequential things.

But you continue to insist that you only have a cold. Right here one of the ever-present, well-defined symptoms of the flu begins to develop, viz., a strong tendency to lie. You even go out of your way in your efforts to tell all your friends you have a slight cold, when you know it is not true.

Another restless, miserable night passes by and you find yourself next morning with a splitting headache and a cough so thoroughly developed that you cough with no effort on your part—cough automatically and in spite of your best efforts to avoid coughing—and every time you cough you distinctly feel your brain strike against the top of your head with a dull, sickening thud, very much like a roll of butter coming in contact with the bottom of a plate. Then when you stop coughing for a moment you feel your brain slowly pull loose from your skull and drop back to its former position, and again you are reminded of a roll of butter, this time pulling away from the bottom of the plate by its own weight when the plate has been inverted.

By this time you will admit to your inquiring friends that you have the grip, just as you have had it many times before. Again that tendency to lie makes itself felt and will not allow you to say frankly that you have the "flu," though you know full well that is your trouble.

On the morning of the third day you have gathered unto yourself all the

aches and pains you ever felt in your life, and a lot of them entirely unlike anything you ever felt before. You have pains all around the base of your skull, pains in the back of the neck, pains under your shoulder blades, pains in every conceivable part of your chest, pains under your short ribs and pains in many other places. You have also begun by this time to have night sweats —not gentle little perspiring spells— but when you awake from sleep you find yourself simply drenched from head to foot with cold perspiration, and you are left with just about as much vim and vitality as there is in a wet towel. And these sweats occur every time you happen to go to sleep, day or night, even though you may only be asleep for a few minutes.

After you have been in bed for a day or two the doctor begins to insist that you must eat something to keep up your strength which you are well aware is rapidly declining. He is very nice about it and doesn't restrict your bill of fare in any way, but says obligingly, you may eat just anything you want. As he talks to you about eating you find yourself wondering why he doesn't suggest that you ought to do the human-fly act on the blank brick wall you can see from your window. You feel that you could do that just as easily as you could eat, and it would at least be a little more exciting. But that tendency to lie, the one symptom that has been present from the beginning, again asserts itself and you obligingly promise the doctor you will eat anything he suggests. As he names over a number of articles of diet which he thinks about the right thing for you, you are racking your brain trying to think of a single thing you feel you could eat if you knew your very life depended upon it. But "there's nothing doing." Only one thing in the world has its natural taste any more, and that one thing is salt. Everything else has a moth ball flavor, and you never liked that, even when you had your boy-appetite, and you simply detest it now.

But all things, good and bad, must have an ending, and after a week or so you begin to feel better. Well, that's not the right way to express it either. You can hardly say truthfully that you feel any better, but you are more nearly accurate when you say you don't feel quite so badly as you did.

Your cough has changed in character. You still cough a great deal but it has a sort of a dry, metallic sound, very much you imagine, like the sound made by filing a saw. And you get about the same results—simply raise a little dust. By and by you begin to eat a little, just to please the doctor and your nurse, your lost strength slowly returns, you begin to be sensible of a strong inclination to get out in the open air and sunshine and see how the world looks again, and then, first thing you know you are telling your friends something like this: "Yes, sir, I've had the "flu" all right, but I want to claim exemption next time it comes along."

(Printed in Charleston, W. Va., Mail, Nov. 30, 1918.)

THE BUREAU OF VENERAL DISEASES

Read at Annual Meeting, Martinsburg, October, 1918.

By F. F. Farnsworth, M. D.,
Charleston, W. Va.

The Federal Government, through the U. S. Public Health Service, has appropriated $1,000,000 per year for the pre-

vention, control and cure of Venereal Diseases in the United States.

West Virginia has been alloted her share of this fund and the Public Health Council has established a Bureau of Venereal Diseases in Charleston, and I have been made Director of it by the Surgeon-General. The field is so immense and the task so stupendous, that I feel like a pigmy standing by the pyramids and expecte,d single handed, to dump them into the sea.

The destructive prevalence of Venereal Diseases has always been known and recognized but, because of the secrecy with which these diseases were contracted, the shame supposed to be connected with their existence, and the solemn truth that there is an immoral streak in all humanity which at heart is always in sympathy with certain immoral practices, we have ever been ready to speak in whispers of social diseases and cure them just as they were contracted, behind closed doors, with the assumption that it was none of the public's business.

The draft examiners, however, have brought the truth so forcibly to the attention of the Government, steps are being taken to organize bureaus in every state in the Union and fight these diseases for just what they are.

Infectious communicable, and dangerous diseases which must always be reported, be kept under constant observation of some one in authority and put under restraint and quarantine when necessary.

General Gorgas informs us that the army loses from venereal infections, more men from effective service more days than from any other cause. He also assures us that if the Medical Department of the Army had the choice presented to it of having every wounded man healed instantly or, on the other hand, having all venereal disease eradicated from the army, if every sentimental and moral reason were excluded and the good of the army alone considered, there would be neither question nor hesitation in choosing for the eradi cation of the Venereal Diseases.

The establishment of this Bureau in West Virginia means that hereafter Gonorrhea, Chancroid and Syphilis will be reported, quarantined, and treated in every legal way just the same as Smallpox, Measles or Scarlatina.

Out of deference to public opinion and to aid the physicians in keeping the confidence of their patients, we are ar ranging a method of report by number so that names will not be given at first.

An announcement has been prepared and is being mailed out to the physicians of the state as rapidly as possible; letters explaining our Bureau and calling upon Health Officers, Medical Draft Examiners, and all other persons who may have knowledge of Venereal infections, to report them to the County Health Office or direct to the Bureau in Charleston.

The following figures compiled from army examinations, which includes examinations by draft boards and in cantonments and camps—also examinations in hospitals and in detention wards connected with police courts, are almost stunning in their terrible truthfulness:

For Week Ending August 2, 1918

Over-seas Force—

Venereal Diseases, 29.8 per 1,000.

All other diseases, 25.15 per 1,000.

Departmental and Other Troops—

Venereal Diseases, 107.7 per 1,000.

All other diseases, 20.76 per 1,000.

All Troops in the United States—

Venereal Diseases, 162.4 per 1,000.

Other diseases, 37.83 per 1,000.

Divisional Camps—

Venereal Diseases, 189.4 per 1,000.

All other diseases, 46.01 per 1,000.

Draft Examinations—

Venereal Diseases, 218.3 per 1,000.

Syphilis alone has been found to infect 51 per cent of all prostitutes.

Syphilis alone has been found to infect 30 per cent of all insane.

Syphilis alone has been found to infect 25 per cent of all hospital patients.

Syphilis alone has been found to infect 15 per cent of all private patients.

Syphilis alone has been found to infect 30 per cent of all criminals.

Gonorrhea infections are much more numerous, and chancroidal infections are plentiful enough but hard to estimate.

All sources of information prove that venereal diseases are rare among unmarried girls of good character, and among married women of good character, the percent runs from 3 to 20.

These figures prove that there is a place somewhere between the innocence of youth and the hardened or diseased conditions which we find in later manhood or womanhood where our great opportunity comes in. Somewhere that the physician may prevent, the moralist may teach, or even the law may take hold and control the actions of men and women, and prevent this great crime to the race.

If we expect to whip the Hun, we must do it with a strong army. Men who are physically fit and women who do not carry infective sores beneath the badge of the Red Cross.

It is claimed that the German army is the freest army of venereal diseases on earth, and in that lies much of its efficiency; on the other hand, during the first two years of the war enough Austrian soldiers were discharged on account of venereal diseases to have made up two whole divisions of fighting force.

PERTUSSIS VACCINE: REPORT OF CASES

Read at Annual Meeting, Martinsburg, October, 1918.

By Joseph L. Miller, M. D.,
Thomas, W. Va.

It is not my purpose to go into detail regarding the history, etiology and symptomatology of Whooping Cough, which are thoroughly familiar to all of us, but to give the results obtained by the use of Pertussis Vaccine in eighteen cases treated within the past year.

Whooping Cough is essentially a spasmodic nervous disease affecting the larynx, caused by a specific bacillus isolated and described in 1906 by Bordet and Gengou. However, after the first week of the "whoop" various other bacteria such as the pneumococcus, staphyloccus, and bacillus influenza are usually found in large numbers in the sputum.

To show the great importance of using every available means to limit and check the ravages of this dread disease of infancy and childhood I wish to quote two of the latest and ablest authorities as to its mortality. Thomson in his Clinical Medicine says: "Statistics show that on account of its complications, pertussis causes more deaths than do scarlet fever and diphtheria." Kerley in his latest book says: "It is probably the cause of more deaths today than any other infectious disease." And a study of the records of the New York City Board of Health confirms both statements.

For centuries it has been treated by a

wide variety of charms, home remedies, and nearly every drug mentioned in the materia medica, with little or no result as to prognosis or relief of symptoms. In the past two or three years the treatment of whooping cough as of many other diseases is being placed upon a rational basis, though by no means perfected as yet. I believe that it is only a question of a few years until our therapeutics will be revolutionized to the point of doing away with the bulk of our present drug treatment of acute diseases; and what we now regard as disease entities will be shown to be merely symptom complex of various known infections, and the treatment will be by specific serums and vaccines as efficacious in their action as that now exhibited by Diphtheria Antitoxin. Every vaccine and serum now on the market is a step in that direction, though as yet but few even approach that state of perfection that is desired.

One of these is Pertussis Vaccines, which in the hands of many observers has proven of considerable value, both as phrophylactic and cure, far superior to any other treatment ever tried.

Cases

Cases 1, 2 and 3—Piazzo children aged 10 months, 4 years and 10 years respectively. Severe paroxysms, 18 to 24 each 24 hours. Vomiting constant. Nose bleed frequent. On December 10, initial doses of 250 million dead bacteria to the baby and 500 million to each of the older children; on the 12th these doses were doubled; on the 14th these again doubled; and on the 17th the latter doubled, or two billion and four billion respectively given. Results: the first dose diminished somewhat the number and severity of paroxysms, and each succeeding dose more so until after the fourth dose, when the cough continued for about two weeks longer but not more than one paroxysm in 24 to 48 hours, then a very mild one without either vomiting or nosebleed.

Case 4—Charlie Tupas, aged 17 months. Third week of the disease. 12 to 15 paroxysms and an occasional vomit in 24 hours. December 12th initial dose of half a billion given; and on the 15th, 17th, and 19th two billion each given. Results: from the first there was a steady diminution of the cough and vomit until it ceased altogether with no paroxysm at any time after the last injection.

Case 5—John Austria, 22 months. Second week, almost hourly paroxysms accompanied usually by vomiting. December 12 th and 14th injections of two billion each given with no apparent result. On the 17th and 19th injections of two billions were again given. Results: after third dose vomiting stopped and paroxysms reduced to about half; after last dose cough continued for two or three weeks with four to six mild paroxysms in 24 hours. Parents would not permit of further treatment.

Case 6—Mike Polansky, age 3 years. Third week, 10 to 15 attacks with vomiting every 24 hours. December 27th first injection of two billion. Paroxysms dropped immediately to 3 to 5 in 24 hours and no vomiting. December 29th two billion given, after which cough continued for about two weeks with an average of not over one paroxysm in 24 hours and that a very mild one.

Cases 7, 8 and 9—Goode children, aged 4 months, 3 years, and 5 years. Third week. Hourly paroxysms, frequent vomiting. January 3rd half a billion given to baby and two billion each to other two children. We were out of serum and did not give second injection until January 9th, when two billion were given to each of the three.

Parents refused further treatment though baby and oldest child were much improved, having not more than one-half as many paroxysms and no vomiting. The other child showed no improvement whatever.

Case 10—Ruthlee Stillwell, aged 9 months. Second week complicated by acute bronchitis, running a temperature of 102°, and pulse of 180. Hourly paroxysms and frequent vomiting. January 11th gave two billion. In next 24 hours she had three paroxysms, but bronchitis cough continued as before. January 11th and 16th three billion each given, after which she had only an occasional paroxysm in next three weeks, during which time she recovered from the bronchitis.

Cases 11 and 12—Netro children, aged 3½ and 7 years. Third week, 10 to 15 attacks in 24 hours, some vomiting. January 17th four billion given to each child. The younger child stopped coughing altogether and the other one had but two or three mild paroxysms in 24 hours, so that parents refused further treatment.

Cases 13 and 14—Thompson children, aged 2 and 3½ years. Second week for first child, and was used as a phrophylactic in second child. Ten to twelve paroxysms in a day and night with an occasional vomit. January 16th three billion given to child with the cough and on the 18th four billion. Cough very much diminished after first injection and stopped altogether after the second injection. The older child received an injection of two billion and did not develop whooping cough, though at the time she had either the beginning of the disease or a slight bronchitis, which stopped in a few days without showing anything characteristic.

Case 15—Frank Volitis, aged 5 weeks. Pertussis for three weeks, coughing hourly, vomiting each time. Frequent hemorrhages from nose and into conjunctiva. Ten to twelve thin mucus stools each 24 hours. Nurse on several occasions though child would never breathe again after a paroxysm. Mother at last consented to use of vaccine, so on March 29th and April 1st injections of two billion each were given. Between the two injections he coughed four times and diarrhoea stopped at once. After last injection did not cough again. I might add in passing that he did not die either.

Case 16—Edw. Sell, eged 3 years. Third week 15 to 20 times in 24 hours, and vomiting nearly every paroxysm. April 17th two billion given, and on the 19th four billion. Between injection coughed but twice, and after second injection cough continued for about two weeks with only a mild paroxysm in two to four days.

Cases 17 and 18—Gotz children, aged 1 year and 3 years. Second week for the older child almost hourly paroxysms and frequent vomiting. September 16th two billion given, which decreased paroxysms about half and stopped vomiting. 19th two billion given, and 23rd four billion. Since last injection mother thinks he has had but two very light coughing spells to present time, September 28th. The younger child received two billion injection as a phrophylactic, and so far has not developed the disease.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., EDITOR
C. R. ENSLOW, M. D.
J. E. RADER, M. D. ASSISTANT EDITORS

Huntington, W. Va., January, 1919

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.
Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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Remember your State Dues.

Each year we find that it is necessary to "jog our memory" a little to think just what things should be attended to early in January. The same applies, I am sure, to all of the other members of the State Association.

This is to remind you to pay the annual dues to your local secretary at once, in order that they may be forwarded to the State Secretary promptly.

Reference to the report of the council proceedings at the last annual meeting will show the good work being done by the committee on defense. Of course no one anticipates any suits being brought against him, still the report shows a number had to be defended. You can never tell, you know. Bear in mind that we can only ask the State Association to take charge of these cases if the defendant is in "good standing" at the time the alleged mal-practice occurred. This is but one of the many reasons for maintaining your membership and paying the dues promptly.

Do not forget that the Council found

it was imperative to increase the amount of the annual dues one dollar for the ensuing year.

DO IT NOW!

THE WORLD DOES MOVE.

The following, from the prospectus of the Central College of Osteopathy, Kansas City, proves it:

> The medical men would like to absorb the osteopaths, and the osteopaths would like to absorb the medical, and the laymen who must become the patients, say, "Give us the best of both." It looks as if the world war is going to force a settlement of the above question, with the chances more than fifty to one in favor of the medical schools absorbing the osteopathic.
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> * * * * * * * * *
>
> After careful thought of this whole question, taking in consideration the remarkable age in which we are living, we have decided that we can accomplish more for our students, more for humanity, more for our government, by raising the standard of our course of study to meet the medical requirements. We have been adding to our course in osteopathy from year to year in the past until it is surprising how close we had reached to the medical standard.

This college has in its faculty about a dozen men who append M. D. to their names, and all branches of medicine, even Materia Medica, are taught. It really looks as if "the tail would wag the dog" in this case.—S. L. J.

A GREAT SURGEON'S SERMON.

It is too commonly said nowadays when men discuss the subject at all that nobody any longer really believes in the immortality of the soul. That men may be immortal in the sense that "their works live after them" most people readily concede; but the confident faith in a future life that was generally felt among all sorts and conditions of men fifty years ago is no longer generally professed, though it may exist. The prevalent attitude appears to be one of indifference or openly expressed doubt.

It is therefore well worth while to emphasize a notable utterance on this subject from one of the most distinguished medical men in this country. Among American surgeons none stands higher in his profession than William W. Keen of Philadelphia. He has contributed to the *Yale Review* for January an article on the "Seven Decades in Medicine" which have been comprised within the span of his long and useful life. It is a wonderful story of achievement; and he concludes it in these words, the italics being ours:

> "I think it is not an exaggeration to say that medicine, surgery, obstetrics and the many medical specialties have made more progress in the seventy-two years from 1846 to 1918 than in as many centuries before. I am also quite willing to believe that the next seventy years will be as fruitful as the last seventy have been. *My only regret is that I shall not be here to witness the progress. Yet I ought not to say that, for I believe as firmly in my future existence, and with powers far superior to the limited powers that are given us here, as I do in my present existence. I believe that I shall know what is going on in this great though little world.*"

These three sentences are a sermon in themselves. They come from one who is familiar with life and death and the

transition from life to death as no layman can ever be. They are uttered by a man who does not speak lightly, but is accustomed to weigh his words. The significance of such a declaration from such a source lies in its necessary implication that in the life work of a surgeon, which keeps him always close to the domain of death, he has found nothing inconsistent with a perfect confidence in immortality.

Somehow, the expression of that confidence by one who has held human life in his hands as a part of the day's work comes to us with greater force and does more to carry conviction than similar expressions which come from other sources.—*New York Sun.*

State News

Christmas greetings have been received from Capt. H. W. Keatley, formerly of Huntington, who was stationed at an advance sector in France at the time of writing.

* * *

Lieut. Carl B. Young, formerly connected with the C. & O. Hospital at Huntington, is in France. He is on the surgical section of Base Hospital 85, located in Paris.

* * *

Capt. Julius C. Shulz, formerly an active practitioner of this city, is in Huntington on a ten-day furlough from the United States Army General Hospital at Boston. Dr. Schulz expects to return to Huntington to reopen his offices as soon as he is discharged.

* * *

DIED on December 13, Wm. Thompson Venning, youngest son of Dr. R. E. and Mrs. Venning, of Charles Town, W. Va., age seventeen years.

The many friends of Dr. and Mrs. Venning throughout the state will regret to hear of the death, from pneumonia, of their youngest son, William Thompson. Billy was a boy of fine character, which had been strengthened and developed by a period of invalidism lasting for more than a year before his death. During this time he had become the center of the family life and he will be sadly missed. Dr. Venning's oldest son, R. E. Jr., is serving his country in France and the second is at the training camp at the University of Virginia. Two sisters also mourn his loss.

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First Lieut. David B. Ealy, who has been stationed in Belgium will soon return to the United States and to his former home at Moundsville.

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Maj. John E. Cannaday of Charleston, is now stationed at Ft. Sheridan, Ill., at the United States General Hospital No. 28.

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Dr. Thos. B. Crittenden, formerly of Harding, W. Va., is now located at Dodson, Md.

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The West Virginia Hospital Association held a meeting at Charleston December 30 and 31. Important subjects that will come up before the legislature were discussed.

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Dr. W. W. Armstrong of Ripley, W. Va., was a recent Huntington visitor.

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Lieut. Alford Whittaker, a well known Huntington boy, is enjoying a furlough of several days with his parents, Mr. and Mrs. A. M. Whittaker, of Sixth Avenue.

Dr. Whittaker has been commissioned

first lieutenant in the medical corps and is in the Roosevelt hospital in New York City.

After the first of the year he will be made house surgeon in the above institution.

* * *

Dr. Wm. C. Gorgas, who in October retired as surgeon general of the United States army, will resume, as director of yellow fever work for the Rockefeller foundation, the work which he temporarily relinquished when this country entered the war. He will sail shortly for South and Central America to direct operations there.

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Capt. Lindsay Vinson of Camp Hancock, Ga., spent the holidays in Huntington.

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Dr. Everett Walker of Charleston, spent two days in Huntington in December in the interest of the United States Government campaign which is being conducted for the control and cure of venereal disease.

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Friends of Dr. Earl B. Gerlach, formerly a well known practitioner of Huntington, will learn with regret of his decision to resume practice in West Palm Beach, Fla.

This information was contained in a letter to friends announcing Dr. Gerlach's recent honorable discharge from the commissioned ranks of the army. He refers in glowing terms to the beauty of his new home, its commercial activity and natural advantages of southern location.

The elder Dr. H. P. Gerlach, father, is with his son and not engaged in active practice. Mention was made of the hunting and fishing trips the physicians enjoy.

Prior to their establishment of a lucrative practice in Huntington the Drs. Gerlach were successful in their profession in Proctorville and neighboring Ohio towns, removing to Huntington about ten years ago. At the outbreak of the war Dr. Earl Gerlach tendered his services to the government and was commissioned at the time of his summons to service in the medical corps, U. S. A.

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Dr. Henry D. Hatfield, Major, U. S. A., head of the surgical department of the Ford Reconstruction Hospital at Detroit, Mich, is in Huntington. He arrived late on Christmas eve to spend Christmas and the remainder of the holiday season with his family at the Hatfield residence on Fifth Avenue. He will return to duty about the first of the year.

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In response to a telegram from the local health officer at Princeton, Mercer County, that there are a hundred cases of influenza in that city and that the mayor refused to co-operate in enforcing any restrictive regulations, Dr. S. L. Jepson, state health commissioner, sent orders to Princeton for the closing of the schools, churches and putting the ban on all public meetings.

He directed the local health officers there to put the orders into effect and gave instructions that unless the mayor co-operated he would personally take charge of the situation and have the costs charged up to the city.

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Dr. Snyder, of Weston, was a visitor in Washington, D. C., on his return home from a visit with his son who is a student at Washington and Lee University.

* * *

Capt. Herman Crary, of the medical

corps of the U. S. army, who has been stationed at Camp Gordon, Ga., has returned home, having been honorably discharged at the termination of the emergency. Capt. Crary expects to re-establish his Huntington office about January 15.

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Dr. A. S. Boswarth, formerly located at Elkins, is now at Jenningston.

* * *

Dr. Harry Parker, formerly of Huntington and Williamson, died in an army hospital at Camp Mills, L. I., in December. He had been ill in a hospital for more than two months prior to an automobile accident at a camp in California. At that time he was injured about the head, neck and chest when an ambulance in which he was riding was hit by a heavy cantonment truck. The influenza was contracted about one week ago which soon developed into pneumonia from which he succumbed.

When Huntington friends visited him a few days ago he seemed much improved and the news of his death came as quite a shock. He had been moved from the California hospital to Camp Mills in order that he might be nearer the home of his parents, Mr. and Mrs. C. P. Parker, of Pittsburgh, Pa.

After having practiced his profession in this city for about three years, Dr. Parker left the city in 1915 and took up practice in the coal fields, locating his office at Williamson. He was a specialist in diseases of the eye, ear, nose and throat. He was a member of the B. P. O. E. and at one time affiliated with the Huntington organization.

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Dr. F. O. Marple of Huntington, has received his honorable discharge as a lieutenant in the medical corps U. S. A., and has resumed the practice of his specialty in association with Dr. C. M. Hawes.

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Dr. O. S. Campbell, formerly of Middlebourne, is now located at Grafton.

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We have been notified of the death of Dr. Geo. C. Rogers, of Elkins.

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The third annual convention of the West Virginia Hospital Association which held its session in Charleston, December 30 and 31, elected the following officers:

President, Dr. J. A. Guthrie, Huntington; first vice president, Dr. Charles F. Hicks, Welch; second vice president, Dr. S. B. Lawson, Logan; third vice president, Miss Noel, Princeton; secretary-treasurer, Miss Knight, Huntington.

Executive committee: Dr. J. A. Guthrie, Huntington; Dr. W. A. McMillan, Charleston; Dr. C. A. Wingerter, Wheeling; Mr. P. O. Clark, Wheeling.

Chairman membership and auditing committee: Dr. H. H. Farley, Logan.

Legislative committee: Dr. Geo. A. McQueen, Dr. W. A. McMillan, Charleston; W. C. Lyon, Hansford.

The time and place for the next annual meeting of the association is to be determined by the executive committee.

The association before adjourning accepted the invitation of Dr. H. J. Moss, of Baltimore, to join with Delaware, Maryland, Virginia and the District of Columbia, in the formation of a Quad station association. The assocation has an official representation of forty-three of the fifty-two hospitals in the state, which is the largest percentage of any state in the United States.

* * *

First Lieut. I. R. LeSage, well known Huntington physician who has been act-

ing as an instructor at the Colgate University, Hamilton, N. Y., has received his discharge. He will resume his practice at his office, 416 Tenth Street, in January.

* * *

A $4,000 X-ray and fluoroscopic machine has been installed at the Huntington State Hospital and will be in operation by January 1, announced the superintendent, Dr. L. V. Guthrie. The instrument will be of great assistance in studying the effect of different forms of insanity on the internal organs of the human body. Since the insant patient cannot tell correctly about his own symptoms, such a machine is of great assistance to the investigating physician in studying the patient.

The fluoroscopic machine is especially adapted for looking through tissues and the new X-ray machine is an improved type which will make more clear photographs of the portion of the body x-rayed than machines previously in use.

ANNOUNCEMENTS AND COMMUNICATIONS

Dec. 23, 1918.

Jas. R. Bloss, Editor,
Huntington, W. Va.

My Dear Sir: Will you kindly call attention in the next issue of your journal to the fact that Dr. Francis D. Patterson, Chief, Division of Industrial Hygiene and Engineering, Department of Labor and Industry, Harrisburg, Pa., is desirous of obtaining a complete list of all physicians engaged in the practice of industrial medicine?

It has been the practice of this department to hold semi-annual conferences of industrial physicians and surgeons for several years. These conferences are well attended, and a great deal of valuable matter is presented in the discussions. In order to reach all physicians interested it is desirable to have their names upon our mailing list. The next conference will be held early in 1919, and it is therefore, essential that the names and addresses of all industrial physicians and surgeons be in my hands as soon a possible after January 1.

Expressing to you my deep appreciation for your courtesy in calling this matter to the attention of your readers, I am,

Very sincerely yours,
FRANCIS D. PATTERSON,
Chief Div. of Hygiene.

* * *

STATE OF WEST VIRGINIA
STATE COUNCIL OF DEFENSE
CHARLESTON

Nov. 29, 1918.

Lemuel B. Spaun, State Director of the United States Employment Service for West Virginia, received today a message from Nathan A. Smythe, assistant director general of the employment service, announcing that efforts would be made to encourage the returning soldier to return to the farm. The plans of the department are discussed as follows in the Smythe telegram:

"Our plan of operations in connection with the placing of a representative of the labor department in every camp under the order of the adjutant general, dated November 23, provides for the establishment by this service of a bureau for returning soldiers in every city and large town.

"Soldiers being discharged at camp and sent home will seek employment at their homes rather than from camps. Finding them occupations thus becomes a community responsibility. The function of the employment service is to concentrate cooperative local efforts and all

information as to positions at central points, furnish means of communication as to labor supply and needs between communities and to inform soldiers in camps where and how to proceed on reaching home.

"Start at once on organizing such bureaus throughout your state, using the local offices of the community labor board and public service reserve agents and getting assistance from other organizations in places where service has no representative. The cooperation of mayors, local councils of defense, labor unions, chambers of commerce, draft board members, county farm agents and other organizations interested should be brought everywhere and every encouragement given thir efforts, giving them representatives in offices if wanted and a share in the local management of this service, furnishing a central clearing house and a uniform system.

"When existing employment service offices are not advantageously located, try to open offices in public buildings or other desirable places, securing if possible local contributions of rent and all volunteer assistance available. Telegraph this office and through respective state directors to representatives of employment service in camps where men from your state have been sent the address of each such office in your state as opened and name of such men in charge. Keep central control and direction of all work for the purpose of clearance and record, encourage each community to feel that the work is being done by the community and that facilities to this service are given for purposes of centralization of information and inter-community clearances. Make every effort to get men back to the farms.

"Extremely rapid demobilization of army on the unit base while industrial changes are pending and during the winter months presents to the country the problem of readjustment in its most difficult form and renders imperative the immediate and most energetic action and cooperation of the best organizing ability in every community. To secure prompt action use the telegraph and long distance telephone."

* * *

December 13, 1918.

Governor Cornwell has addressed the following letter to all prosecuting attorneys of the state:

To All Prosecuting Attorneys:

A traveling man has sent to me a printed card which is being circulated throughout the coal fields of Fayette and Raleigh counties, as follows:

"WE PAY CASH FOR LIBERTY BONDS

OFFICE AT LAFAYETTE HOTEL
Thurmond, W. Va."

Reports from other sections indicate that speculators realizing that a great many people will want cash as Christmas approaches, are buying the Liberty Bonds at a big discount. Every such person is clearly subject to the provisions of Section 107, Chapter 32 of the Code, and unless he obtains a state license, should be treated as a private banker or money broker, promptly arrested and prosecuted.

May I ask your earnest co-operation in protecting the people against these sharks?

Very truly yours,
GOVERNOR.

* * *

TWO JOURNALS IN ONE MONTH

A few weeks ago we received an announcement from the *Medical Review of Reviews*, advising us that thy had just

purchased the *Buffalo Medical Journal,* which was to be consolidated with their own publication in January.

We are just in receipt of another announcement from the *Medical Review of Reviews,* advising that they have also purchased *The Southern Practitioner,* which will also be consolidated with the *Review* next month.

This is the fourth journal which the *Medical Review of Reviews* has purchased and consolidated under its present management, and certainly speaks well for the continued success of this publication.

The *Medical Review of Reviews* announces that it hopes to purchase still other medical journals, and will pay cash for any that are for sale.

Medicine

VALUE OF VACCINATION AGAINST INFLUENZA

We publish in our correspondence department in this issue an interesting letter with the above title. In it the author apparently takes it for granted that the influenza bacillus is the primary cause of the acute epidemic respiratory infection now pandemic and being generally called influenza. There is no conclusive evidence that the Pfeiffer bacillus plays any greater role, if as great, in the present epidemic than any other bacterial found in the respiratory tract in this disease. This point emerges very clearly in the abstract of recent English and German literature and in the original contributions printed in this issue. We would also emphasize that, so far as we know, the influenza bacillus is a very poor antigen; there is, in fact, nothing to show that definite antibodies against the bacillus develop in the course of influenza, and the results of animal experiment show that it required prolonged immunization before any response becomes apparent. Again, we have no record of any properly produced and controlled experiments on human beings with influenza vaccines. No results of careful observations are as yet at hand. These things being so, what would a fair-minded and thoughtful physician say as to the face value of influenza vaccine? In this connection we give two examples of so-called "evidence" that appeared in newspapers, which seem to be the medium through which most of the evidence is appearing. One appeared in the health department, conducted by a physician, of a metropolitan newspaper in the middle west under the utterly misleading heading "Vaccine Blots Out 'Flu.'" We quote:

> The evidence of the efficiency of the treatment is this: On October 20, about half the population of a town of 10,000 had been vaccinated at least in part. There have been seven cases of the disease. All the cases were among unvaccinated people. In a nearby town, with 400 inhabitants there have been 200 cases and fifteen deaths. In the asylum three cases developed. Everybody was vaccinated and the disease did not spread. In St. Mary's Hospital the disease got a foothold among the doctors and nurses. After vaccination the disease stopped at once.

The other appears in an eastern paper as an interview with a physician, who, incidentally, is a manufacturer of vaccines, although this vital fact does not appear in the item. Again we quote:

> I think it but just that I should report the success I have had in treating and preventing Spanish influenza with vaccine. I had given

over 1,000 inoculations with 100 per cent protection and treated several hundred cases with no deaths. Prior to the time I used vaccine nearly every one exposed to the disease contracted it. Now I blot it out of every house at my first visit by inoculating the entire family.

This so-called evidence has not yet been submitted in any scientific manner with the necessary facts and details to permit any judgment whatever to be formed as to its true value. In the meantime, we should not forget that in its natural course, epidemic influenza is affecting different, even adjacent, communities with widely varying degrees of severity, and that vaccination, an institution after the disease has appeared can have no value as an experiment because it may have been done in the wane of the epidemic. Finally we repeat: Vaccination against epidemic influenza is in a wholly experimental stage. Nothing can be learned as to its real value from indiscriminate vaccination of the public. The physician who, in view of the severity of the epidemic, feels that he is justified in vaccinating his patients should be fair to them and protect himself by informing the patient that he regards the procedure as wholly of an experimental nature. Pending developments, nothing should be done by the medical profession that may arouse unwarranted hope among the public and be followed by disappointment and distrust of medical science and the medical profession.—*J. A. M. A.*, 11-9-18.

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DANGER OF THE MASK FOR PROTECTION AGAINST INFLUENZA.

A BETTER DEVICE

By J. C. MINOR, *M. D.*, Hot Springs, Ark.

The ultramicroorganism is unimpeded by the mask in its flight through the nasal passages, even by the six fold gauze so forceful is the inhalation of air as compared with the exhaling through the mouth and nasal passages. The return of the air breathed in is arrested by the mask and thus a second shot is taken at rebreathing air vitiated not only by the microorganism of influenza, but it is necessary to rebreathe the normal output of the lung excretion in addition.

I am offering as a more sensible filter the inch gauze pledget folded to a cone shape and inserted into the nostril. Cut the gauze about one inch square, or carry in the pocket a one inch gauze roller bandage and with pocket scissors cut one inch of the gauze and fold it three times. Insert one of these pledgets in the nostril right and left whenever the mask would be indicated.

The public might be instructed by the family doctor to use this not unseemly precaution when at home or on duty or when traveling or shopping. The nostrils should not be stuffed. The pledget should rest lightly in each nostril as a miniature filter and must not impede breathing through the nose.

I do not approve of the mask, nor do I believe that spraying the air passages with irritating lotions is of any value. On the contrary, the most soothing lotions to the sensitive areas of the nasal and throat passages should be used. The ideal lotion to my mind is made from the alkaline antiseptic tablets which have been familiarly known to the profession for years. There is no just reason why every one should not carry a supply of these inch gauze cuttings wrapped in tinfoil or paraffin paper at all times to be used frequently during the day or night.

The mask is impractical, because the entire population of a town cannot be coerced into using it. It is not generally

used by the doctors. It is expensive; it is dangerous, because it is filthy; it cannot reasonably be rendered aseptic for using over again. Cotton is twenty-six cents a pound in the field. There are a hundred million of us.—*N. Y. Med. Jr.*, 11-23-18.

* * *

REACTION FOLLOWING ADMINISTRATION OF NEO-ARSPHENAMIN (NEODIARSENOL BRAND)

A strong married woman, aged 36, weighing 175 pounds, presented herself for treatment for the secondary stage of syphilis with a 100 per cent. Wassermann reaction. During the fifteen months preceding she had received six intravenous injections of the German-made neosalvarsan without any reaction. One ampoule of 0.3 gm. of the neodiarsenol brand of arsphenamin was dissolved in 10 c.c. of distilled water previously boiled and then cooled to body temperature. The solution was cloudier than the imported product. Thirty seconds after the entire dose was given the patient began to gasp for breath and complained of tingling in her fingers and hands. She became almost pulseless, her pupils dilated, and her eyes rolled back as if she were dead. The stimulant closest at hand was aromatic spirit of ammonia, which I placed to her nose. She began to rally after a minute, and then became nauseated but could not vomit. Her head began aching very severely. I gave her a hypodermic strychnin sulplate, 1-30 grain, for her pulse was still very weak and rapid. This dose was repeated fifteen minutes later. After one and one-half hours she was able to ride home in a car. All symptoms had abated except weakness and the headache, which remained about five or six hours, after which she was perfectly normal.—K. M. RICHARDS, M. D., Rankin, Ill.

THE DIAGNOSIS OF ACUTE PULMONARY EDEMA

The diagnosis of acute pulmonary edema is of utmost importance from the fact that the process is particularly serious, but may be easily overcome by free blood letting. This treatment, to be of any use, must be resorted to at once, so that an early diagnosis is essential.

The importance of an exact diagnosis is quite as great for the future as for the present of the patient. A subject who recovers from one attack remains exposed to a recurrence, and, what is of still more import, an acute pulmonary edema is frequently the signal of an aortitis or a nephritis, which has been overlooked until the development of the pulmonary process.

For these reasons it is well to keep in mind the syndromes of the pulmonary manifestation in order that a differential diagnosis may be made. In the type of acute pulmonary edema with a bronchoplegic onset, the pale face may lead one to suspect a syncope, but auscultation of the heart shows that the organ is functionally active. The process must not be mistaken for an asthmatic paroxysm, an error which may well be made when the medical man is called suddenly in the night to the bedside of a patient seized with an attack of suffocation. Acute pulmonary edema has the uncomfortable habit of occurring in the night.—*Abs. N. Y. Med. Jr.*, 8-10-18.

* * *

BRONCHIAL ASTHMA

Some of Rackemann's conclusions may be summarized as follows: "Bronchial asthma" is a symptom of some other disease condition. The 150 cases of asthma studied can nearly all be divided, according to the etiology of their attacks, into various subgroups under the general

headings of "extrinsic asthma" and "intrinsic asthma." Extrinsic asthma includes 28 per cent; intrinsic asthma includes 53 per cent of the entire group —the other 19 per cent being unclassified. A history of either asthma, hayfever or food poisoning in the immediate family, occurs in 58.7 per cent of the cases of extrinsic asthma, but in only 10.5 per cent of the cases of intrinsic asthma. Skin tests are of great assistance in confirming the diagnosis. Skin tests alone are of no value unless reasonably compatible with the patient's history or experience. A positive skin test is a necessary preliminary to successful specific treatment. The "nervous" element is very important in asthma, but probably does not explain why certain individuals have asthma. Treatment resolves itself into the treatment of the exciting cause. Various different therapeutic procedures sometimes yield favorable results, but these cannot be explained. The real problem—what is the fundamental disturbance of anatomy or physiology which expresses itself by attacks of asthma—remains unsolved.—*Jr. A. M. A.*, 11-8-18.

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VAGINAL DOUCHING

Fothergill says the vaginal douche can has, on the whole, been a curse to womankind rather than a blessing. Just as there was a pessary age, characterized by the haphazard use of pessaries in the treatment of the minor ailments of women, so there has been a long period of indiscriminate douching which has not yet reached its belated end. For a time douching remained under the control of the medical profession; but then the general public began buying douch cans on its own account, and the pernicious but apparently seductive habit of antiseptic douching is now generally begun on the advice of an elderly relative. Every patient who complains of minor pelvic ailments should be asked whether she douches or not; and if she says "Yes," should be told to stop it. The vaginal surface has no glands, and is not a mucous membrane, but is covered by stratified squamous epithelium, which though very strong and resistant to infection. is, so to speak, not quite waterproof. Thus the vaginal secretion is simply serum which exudes from the surface of the squamous epithelium, and which acquires its normal creamy appearance by admixture with leukocytes and epithelial debris. Sliminess of the vaginal discharge is due to an excess of mucous which comes from the lining of the uterus and not from the vaginal wall. The normal vaginal secretion is definitely acid in reaction, and this acidity inhibits the life of most septic and pathogenic organisms. Thus the normal content of the vagina is a barrier to ascending infections, and it is generally sufficient to protect the uterus.—*Ab. Jr. A. M. A.*, 6-8-18.

* * *

ABORTIVE TREATMENT OF FURUNCULOSIS

R. Burnier (Presse memicale, May 2, 1918) recommends the root of the burdock, *Arctium loppa,* for this purpose. It must be collected in the spring, while the leaves of the plant are growing; otherwise, it is not therapeutically active. Its properties can be preserved by subjecting it to "stabilization" by the procedure of Perrot-Goris, which destroys the oxidases and thus prevents deterioration of the dried root. While empirical, the therapeutic action is very evident in furunculosis, no matter how long the condition has been present. Generally, within twenty-four to forty-eight hours after ingestion of the drug the pain passes off and the inflammation

is allayed, and on the third or fourth day the core and pus surrounding it are spontaneously evacuated. Where there are several furuncles, those farthest advanced show this transformation; the more recent ones shrivel and have usually disappered by the time the others open. The treatment was employed with success in several cases. A typical case was that of a man of twenty-eight years who had been having for three weeks a series of furuncles on the neck, cheeks, and eyelids—the latter with marked edema. After ingestion of nine pills of the drug each day for three days, the furuncles opened and dried up, and no more appeared. The local treatment consists merely of applying dry gauze to prevent friction by the clothing. The amount of the drug administered three times each day in pills made from a soft extract is 0.6 gram. The treatment is continued until the lesions have completely healed, i. e., for about five or six days. The author adds that the drug is devoid of effect in folliculitis or other superficial staphylococcic affections of the skin; in such cases, tin and tin salts, as recently recommended by Frouin and Gregiore, should constitute the internal treatment.

Surgery

RADIUM TREATMENT OF SCARS

The following are the conclusions of an article by Stevenson, of the Blackrock Military Orthopedic Hospital:

1. Radium has a distinct sphere of usefulness in the treatment of scar tissue and fibrous adhesions.

2. It is a valuable adjunct to other methods of orthopaedic treatment, especially by shortening their duration.

3. Its effect is rapid, sometimes immediate.

4. It softens and mobilizes scar tissue.

5. It appears to facilitate subsequent removal of the scar by the knife.

6. It enables structures, like tendons adherent to the scar, to free themselves.

7. By loosening tendons and stiff joints it improves the functional power of the part.

8. It possesses the advantage of acting, to some extent, as an innocuous local anæsthetic for about a week.

9. It is particularly useful in treating scars and adhesions in the hands and fingers.

10. It is easily applied to the surface of the skin, and by this method causes no inconvenience to the patient.

11. To obtain the best results a single large dose is necessary.

12. The dose should not be so great as to produce inflammation of the skin.

13. With suitable dosage it appears to produce no ill effects.

14. In small doses it appears to hasten the healing of wounds, and to allay the painful inhibitory effects of the products of inflammation.—*The Lancet*, Mar. 23, 1918.

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SURGERY AND SANITATION

Military surgery is reflexly influencing civilian surgery, and it will do so more and more. Already our whole scheme of antisepsis has changed. Dressings are changing radically. The let-alone treatment, conservation, new methods of drainage, and many other things are coming to the fore. Orthopedics is changing rapidly, and various forms of operative and other technic are being modified, especially in the genito-urinary field. In the future abdominal surgery will be largely anticipated before the abdominal and pelvic organs are involved, the bacteriologist working

with the surgeon to achieve this result. Surgery and therapeutics will be more and more blended, and both will be more specific than they are.

* * *

SPINAL ANAESTHESIA

Blanc has found the anæsthesia available in from three to ten minutes after injection of the anæsthetic into the spinal canal; the sensation of contact is retained. The anæsthesia was a success for operations on the legs but, for herniotomies, sometimes a few whiffs of cloroform were necessary in addition. In his 200 cases of intraspinal anæsthesia there were serious mishaps only in two cases. In one of these by mistake the assistant had made the solution with 0.12 gm. of novocain, and syncope followed, requiring artificial respiration under which the patient promptly recovered. In the other case the patient was an elderly man with impassible stenosis of the urethra, and the operation was for retrograde catheterization. The operation was brief, but there was some cyanosis afterward and coma followed in an hour with death in another hour.

The anæsthesia lasts about two hours and there is sometimes headache, but it is very slight and brief. There is often a febrile reaction, evidently from aseptic irritation of the meninges as the spinal fluid looks turbid the next day and there is polynucleosis, but all returns to normal by the third or fourth day. Vomiting and paresis were never observed. He operated above the umbilicus only in one case, on an echinococcus cyst in the liver and the operation was a smooth success. The anæsthetic used was generally 6 cg. each of stovain, glucose and 1 per thousand epinephrin in 1 c.c. of physiologic serum. Of late he has been using cocain and epinephrin.—*Jr. A. M. A.*, 6-8-18.

THE PRINCIPLES OF THYROID SURGERY

MAYO, C. H.

Tr. Am. M. Ass., Sect. Surg. Gen. and Abdom., Chicago, 1918, June.

The thyroid undoubtedly is one of the most important glands in the body, and while a complete knowledge of its activities is still lacking, the work of Plummer and Kendall, through investigations into the physiologic action of its secretion, is such as to nearly accomplish the realization of its fundamental effect on life. Kendall has been able to separate the compound of the thyroid containing iodine from the balance of the gland. This is accomplished by destroying the proteins of the thyroid by means of boiling with a strong alkali, which does not decompose the iodine-containing compound, and, by suitable treatment, it can be separated as a pure crystalline substance containing 65 per cent of iodine; its formula is $C_{11}H_{10}C_3Ni_3$. The compound contains an organic nucleus called indol, as well as oxygen. Investigation of the activity of the gland shows that the iodine is not directly involved in the functionating of the substance, but merely increases its power to react.

Plummer, from a clinical standpoint, in the observation of many thousands of cases of goiter numerous cases of cretins and of myxœdematous patients, has shown that the rate at which energy is produced by the animal organism is controlled by the amount of thyroxin which is acting within the cells of that body. While not the only factor influencing the rate at which one lives, it probably has more to do than any other substance with the governing of the speed at which energy is produced in the body. Plummer shows the average basal metabolic rate of exophthalmic goiter patients at the time of coming under observation

to be 52 per cent above normal, and the average rate in those in whom ligations were done and who returned in three months to be plus 39 per cent. The average metabolic rate eighteen days after thyroideetomy is plus 19. Ligation probably eauses the metabolic rate to drop approximately 20 per eent. Other factors being eonstant, the total energy output of the body varies with the amount of thyroxin in the tissues and the rate of excitation.

In persons under twenty-five years of age, small adenomata in the thyroid and the simple colloid goiters are only occasionally recommended for surgery. Later in life, the degenerations whieh oeeur in goiters of long standing, such as encapsulated adenomata and encapsulated colloid areas when the secretion has become redueed, may develop thyrotoxie eonditions.

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CATHETERIZATION IN OBSTETRICS

Virginius Harrison (*Va. Med. Monthly,* July, 1918) warns against the practice of instructing the nurse to use the catheter in a given number of hours after delivery. Obstetrical catheterization is more dangerous than any other use of this instrument, owing to the presence of the lochia, bathing the vulva and mouth of the urethra with a fluid containing the germs from the cervix, vagina, and vulva, recently expressed from their deep habitats in these struetures. In addition, the urethra and even the bladder may have been bruised, with corresponding reduction of resistanee to infection. Nothing need be done until distention, discomfort, or both, occur; all means other than the catheter should then be tried, and the catheter used only as a final resort. If pituitary extract has been used, the bladder will surely empty itself as soon as distention occurs. Otherwise, the patient should be put on the pan and left alone a while; next, warm sterile water may be poured over the vulva; again, one may try sitting the patient almost straight on the pan; if not sueeessful, one should wait a little longer and try again. A little lochia on the eatheter renders it unfit for use. Two catheters should always be prepared for this reason. A good light and good position of the patient are necessary for proper use of the eatheter by the nurse.

* * *

PREVENTION OF GAS PAINS

L. A. Emge (*Jr. A. M. A.*, Sept. 14, 1918, says that voices of protest have been raised from time to time against the practice of preoperative purgation, citing the statements of a number of prominent surgeons in confirmation, and points out that in spite of these utterances the praetice is dying hard, like most other medieal traditions. That preoperative purgation is not at all neeessary and that its omission is rather beneficial than harmful have been shown repeatedly in emergency operations. Such operations have disproved that it is more difficult to pack off an unpurged bowel than a purged one, and show quite the opposite to be the truth, for the purged bowel is often distended with gas and is decidedly congested. Post-operative peritonitis, while rare, would seem to be favored by the practice of purgation, for the danger of organisms passing through the intestinal wall is enhaneed when the intestine is congested and distended with gas. The movements of the purged intestine are also greatly inhibited, which leads to stasis and the retention of the contents with inereased opportunity for gas formation. Further, the intestine is prone to irregular eontractions after purgation, whieh are much more painful

than regular peristalsis. These statements have been proved, not only by clinical observations in emergency cases, but also by careful and well controlled experiments on animals. In order to put the matter to still further test the incidence of gas pains was recorded in two series of fifty major abdominal operations, the one with, the other without, preoperative purgation. In the purged cases twenty-six per cent. of the patients had no gas pains and twenty-two per cent had severe gas pains, while in the unpurged series only two per cent had severe pains and sixty-six per cent had none at all. In the patients who were not purged the only preparation consisted in giving a single enema to clean the lower bowel.

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THE IMPORTANCE OF THE WORKINGMAN'S HAND AND ITS TREATMENT WHEN INVOLVED IN SEPSIS.

EDWARD H. RISLEY, M.D., F.A.C.S., *Int. Med. Jour.*, April, 1918.

The great importance of considering the septic hand from an economic point of view from the very start of the infection till the man is back at work again.

The great importance of bed treatment for every case of septic hand or hand infection.

The reduction in the number of secondary operations necessary when this method is carried out and the longer course of treatment necessary even when under the most ideal out-patient or ambulatory treatment.

The general treatment should not be neglected.

Splints should always be employed at the very onset of every finger or hand infection.

Edema of the dorsum is a very common sign, but more often it is an accompaniment of palmar pus than an indicator of a dorsal focus.

Some degree of lymphangitis is found present in practically every case if looked for early enough.

Of the two forms of inefficient surgery "cutting bone" is far more dangerous than the so-called medical incision, which often relieves tension and produces drainage enough to be helpful rather than otherwise.

Lateral incisions are of the greatest value and less liable to open up uninfected tendon sheaths.

The early establishment of passive motion and massage, especially to the unaffected parts of the hand, is of utmost importance in shortening the period of disability.

Tendon involvement is by proper care preventable and is a far too common occurrence.

Early plastic operations or amputations are desirable after a thorough preparatory course by Zander treatment.

* * *

ETHYLENE-ETHER ANALGESIA

Dr. James Cotton, Toronto, Canada: Chemically pure ether is no anæsthetic at all, but after standing several days it becomes an excellent anæsthetic. The gas ethylene is the product giving ether its potency for pain relief. Ethylene ether, a combination of chemically pure ether with ethylene gas, has properties differing very materially from those of ordinary anæsthetic ethers. Under ethylene ether, given by a closed or semi-closed method to confine and use the available ethylene gas, profound analgesia may be secured without loss of consciousness and with scarcely any effect on the ordinary reflexes, which have heretofore governed the maintenance of anæsthesia. It is quite possible to per-

form major operations under this ethylene-ether analgesia. Instead of depressing the circulation it stabilizes it, and this fact seems to play an important part in the incidence of analgesia, as it is coincident with the stabilization of blood pressures. The pupil instead of becoming dilated remains responsive to the light reflex and does not roll. Patients not only retain consciousness but in some instances have answered the telephone during operations and eaten meals. Ethylene ether stimulates the higher centers to excessive cerebration and provokes an intense hunger which must be satisfied. This stimulation continues for hours after the anæsthetic is discontinued, and is in striking contrast to the toxic condition manifested after ordinary anæsthesia. In fact, ethylene-ether analgesia raises the question as to whether or not previous conceptions of anæsthesia have not been entirely based on the toxic rather than the analgesic and anæsthetic effects of ether. It is possible to accomplish unconscious anæsthesia with ethylene-ether, when the patient demands unconsciousness, but the recovery from this deeper state of anæsthesia is equally rapid and pleasant. It would appear that one ether that has established itself in most surgical clinics as routinely potent derives its especial potency from the fact that being manufactured by a sulphuric acid process it contains from one-half to one volume of ethylene. Much larger volumes of this gas are necessary, however, to secure the peculiar effects of ethylene-ether analgesia. It would seem adaptable to all operative procedures, except tonsil operations, for which it does not sufficiently obliterate the throat reflexes, although it obviates all pain. Skilled throat specialists have used it with satisfaction even for tonsillectomies.

Being so free from the usual toxic effects of ordinary ether anæsthesia, ethylene ether has made it possible to study the detrimental effects of tobacco smoking preliminary to operations and to determine that some brands of tobacco, when the smoke is inhaled, may even spell disaster if used previous to operation by wounded soldiers. Ethylene ether requires an expert anæsthetist to understand its administration and use it successfully.—*Jr. A. M. A.*, 11-9-18.

* * *

OPERATIVE TREATMENT OF GOITER.

It should be remembered that iodine should be cautiously used in the treatment of any goiter. Adenomata are not curable by medicine or by x-ray.

The treatment of exophthalmic goiter should be carried out by the physician and surgeon co-operating for the good of the patient. Medical treatment is seldom permanent and surgery is necessary to effect a cure. Each case should be studied individually and an operative time selected during a stage of comparative quiescence. The psychology of the patient should be analyzed and every effort made to eliminate fear. Ligation of one or more thyroid arteries is often advisable preceding resection.

The Kocher collar incision is used. The sternohyoid and sternothyroid muscles are separated longitudinally in small goiters and divided transversely high up in the large types. It is well to leave portions of both the inferior and superior poles so that the parathyroids will not be imperiled. The recurrent laryngeal nerve should be avoided by leaving the posterior sheath of the thyroid. Adenomata may be shelled out, and all such tumors should be removed; otherwise a recurrence is likely.

The divided ribbon muscles must be

sutured and the platysma carefully approximated. Drainage is not necessary if hæmostasis has been good, but where a large raw surface of the gland is left, a small folded rubber dam drain is best. As to the secretion of the thyroid causing toxic symptoms by absorption from the wound, the author thinks the idea a myth.—W. I. TERRY, *Northwest Med.*, 1918, xvii, 20.

BOOK REVIEWS

GYNECOLOGY. By Wm. P. Graves, M. D., Professor of Gynecology at the Harvard Medical School. Second Edition, thoroughly revised. Octave volume of 883 pages with 490 original illustrations, one hundred of them in colors. Philadelphia and London, W. B. Saunders Company. 1918. Cloth $7.75 net.

This second edition of Graves brings the book as nearly as is humanly possible up to date, which, in view of the many recent advances made in this branch of medical and surgical practice, is an accomplishment very creditable to the able author as well as a great satisfaction to the profession in general. The section on the Relationship of Gynecology to the Internal Secretions, the consideration of which subject appeared in the former edition has been almost entirely re-written and considerably enlarged. In the third part of the book a number of new operations on the Abdominal Wall are described, also on the Bladder. The Ureters, the Kidneys and the Rectum. The book as a whole, is a well arranged, comprehensive treatise on the subject considered of much interest to the practitioner and student and makes a valuable addition to library.

* * *

The Annual Report of the Surgeon General, U. S. Army, for 1918 (including statistics for the calendar year 1917 and activities for the fiscal year ending June 30, 1918), has just been issued from the Government Printing Office. It contains a comparative study of the health of the army, 1820-1917; an account of the health of the mobilization camps and of the army by countries; a consideration (70 pages in extent) of the principal epidemics in the camps; and a discussion of fractures and operations. Nearly 200 pages are devoted to the special activities of the medical department with the American Expeditionary Forces and in the divisions of sanitation, hospitals, supplies, laboratories and infectious diseases, internal medicine, general surgery, orthopedics, head surgery, neurology and psychiatry, psychology, food and the Dental and Veterinary corps. In addition to the usual tables of illness, discharge for disability and death, there are given tables of battle wounds and operations; of complications of various diseases and of case mortality. The text is illustrated by 73 charts. Altogether the report is a study of health and morbidity in an army of over 1,500,000 men. for the most part yet in the period of training. It should be of interest to epidemiologists, vital statisticians and army medical men.

Health News

Child welfare doctors and nurses have been sent to France in three different detachments and work in plenty is found for all, as it is stated that "The demand for children's specialists far exceeds expectations." The Red Cross will endeavor to decrease the present high death rate among children under two years of age, which, with the falling birth rate, threatens rapidly to depopulate the country. House to house work and educa-

tional campaigns will be conducted both in the cities and through the country districts.

American Red Cross medical work for children of French Repatries has been started. These children are in poor condition, many suffering from tuberculosis, skin and infectious diseases. At Evian, a hospital of 30 beds, for the sickest children, has been opened, and a convalescent hospital of 120 beds, at Thonon, near Evian, is being taken over by the Red Cross and plans are being made for a convalescent hospital of 250 beds at St. Joseph du Lac, also near Evian. Seven ambulances have been sent by the American Red Cross to Evian for transportation of sick children to the hospitals. One American nurse has been in charge of 120 beds for sick children for eight months, and results with the meagre equipment have been marvelous.

The Red Cross has also established a children's refuge near Toul, where 750 boys and girls from nearby villages, which have been under bombardment, are now being kept safe from gas attacks under expert medical care in co-operation with the French government.

In Belgium the Red Cross, with the co-operation of the Rockefeller Foundation, is preparing to care for between five and six thousand children.

ONE PHASE OF HOME DEFENSE

"Protect the defective children, provide for their training and proper care, and you will lessen the burden of dependency and delinquency." This is the gist of the advice contained in a new report on Mental Defectives issued by the Children's Bureau of the United States Department of Labor, and appearing with special timeliness now that war conditions may tend to make more serious the problem of delinquent and dependent children.

The report is based on a study of the social conditions of 212 mental defectives in New Castle County, Delaware. A total of 175, or more than four-fifths of these, were in need of public supervision or institutional care because of bad home conditions, physical helplessness, or pronounced anti-social tendencies, and only twelve of them were provided for in an institution adapted to their care. Twenty-six of the defective children were in industrial schools for delinquent children, and of these the report says:

> "Institutions for the care of delinquent children are greatly handicapped by the presence of defectives, since they require special attention and exert a bad influence over the normal children. After a short period of residence these defectives are returned to th community without sufficient supervision."

Other defective children with delinquency records were at large in the community; in all 98 of the 212 defectives studied were delinquent or immoral or difficult to control.

The report suggests that, while any program for the care of mental defectives must have as its central feature suitable institutional provision offering training or custodial care according to the needs of the individual, other activities are equally essential. It is pointed out, for example, that institutional care is not necessary for all mentally defective children, for, contrary to the popular impression, it is found that there are certain types who safely can remain at home provided they have the attention and study which they deserve. However, special provision should be made

for their safety, care, and education, and out-patient work of an institution for the feeble-minded, in co-operation with schools, social agencies, and families, is referred to as a new and important method of providing in the most human possible way for such children.

The possibilities of industrial training by which certain types of defectives may gradually become in part self-supporting and the importance of providing facilities for mental examination and diagnosis of doubtful cases are also brought out in the report.

CONDEMNS PATENT MEDICINE RAID ON CHINA

Recent action of the United States Department of Commerce in recommending China to American patent medicine interests as a good field in which to develop their business, is unanimously condemned by anti-tuberculosis workers all over the country through a resolution adopted by the National Association for the Study and Prevention of Tuberculosis made public today.

It is maintained that the information and advice on this subject given in the department's special consular report No. 76 practically places a branch of the United States government on record as promoting a traffic that has been condemned as an evil by every reputable medical or public health body in the country, both official and unofficial. This is of particular moment to anti-tuberculosis workers in view of the fact that the sale of alleged "consumption cures" constitutes one of the most tragic phases of the patent medicine traffic.

The National Association in its resolutions severely criticizes the department's action in these words:

> "Resolved, that the National Association for the Study and Prevention of Tuberculosis condemns such action on the part of the United States Department of Commerce, and that the Executive Secretary be instructed to forward a copy of this resolution to the Secretary of said department, urging that hereafter the influence of the United States government should not be used in support of the patent medicine business."

The National Association estimates that not less than $20,000,000 is invested in the business of manufacturing and exploiting fake cures for tuberculosis, and that the annual income from these concerns and individuals is $15,000,000 About one-third of this amount is spent for advertising, leaving a profit of $10,000,00 a year, which is characterized by the association as "blood money" taken from ignorant consumptives. There are over 500 of these so-called fake tuberculosis remedies listed. No drug or specific cure for this disease has yet been found, it is declared; but, if discovered early enough tuberculosis may be cured by proper medical direction and the application of fresh air, rest, and good food.

It is pointed out that China has not yet reocvered from the effects of the opium habit that was foisted upon it by western civilization and that it is particularly unchivalrous of the United States government to help foist a new evil upon this people while they are in the throes of reorganizing their society on a more intelligent and democratic basis.

BIG YEAR FOR ANTI T. B. LAWS

The war, particularly since America's entry, has proven a great stimulus to anti-tuberculosis legislation during the past year. The National Association for the Study and Prevention of Tuberculosis, in summarizing the work of the

state legislatures in session, 38 enacted anti-tuberculosis laws and 14 passed laws relating to county tuberculosis hospitals. The only law-making bodies that failed to take action in this direction were those of Alaska, Arizona, New Mexico, Porto Rico, Utah, Hawaii and Nevada.

The National Association, which is working with the Council of National Defense in fighting the spread of tuberculosis in the army, has contributed largely to this result by its vigorous propaganda, both directly and through the medium of its 1,500 affiliated state and local organizations. Believing that a fundamental of this military health campaign lies in effectual legislative protection of the nation's homes, unusual effort in this direction has been made during the year.

Of particular importance, it is believed, in checking tuberculosis at its source, is the establishment of a sufficient number of well regulated local tuberculosis hospitals to care for and segregate active cases. The number o county hospitals provided for during the year has, therefore, been especially gratifying to the workers.

Most satisfactory to the National Association of the laws passed in this connection is the New York State County Hospital War Emergency Measure, enacted at the instance of the State Charities' Aid Association just before the legislature adjourned at Albany. This law provides that any county in the state not yet provided with a tuberculosis hospital which shall have failed to make such provision by January 1, 1918, shall no longer have option in the matter. The State Department of Health will be empowered to step in and establish a hospital in the dilatory county and compel the county to pay the bill for building and supporting it. Of the eleven New York counties which have taken favorable action recently a large part were whipped into line by this law.

Favorable legislation on county tuberculosis hospitals was also enacted in California, Florida, Illinois, Iowa, Nebraska, Delaware, Massachusetts and Ohio.

FIVE FILTHY FINGERS

Did you ever make a diary of your fingers. Did you ever set down in cold black and white the things your fingers touch every day and did you ever consider the number of times daily that your unwashed fingers seek your mouth?

When surgeons discovered that it was their own infected fingers which carried germs into wounds they set about trying to discover a means whereby their hands could be rendered surgically clean, i. e., free from germs. The whole realm of chemistry was ransacked for agents which would disinfect hands, and the scrubbings and immersions to which they subjected their hands are even yet a tender memory to the surgeons of that period. But all of these efforts proved useless and at last in despair, surgeons took to wearing rubber gloves which could be boiled, thus bringing to each patient, as it were, a fresh pair of sterile hands. In other words, try as you will you can't by any known method make your hands absolutely clean.

The great agent in the spread of those diseases whose causative organism is present in the secretions of the mouth and nose, is the human hand; and if saliva was bright green we would be amazed at the color of our fingers. As a matter of fact most of us carry out fingers to our mouth or nose many times daily, there to implant the germs of disease which other careless people have

spread about, there to collect a fresh cargo of infectious material to scatter for somebody else.

It is true that most germs of disease die quickly once they leave the human body, but what does the death of a few billion germs matter so long as the supply is copious and never ending?

What an enormous number of infected things we touch during the day and how infrequent and cursory are the hand washings we perform.

The answer is to keep your fingers out of your mouth and nose. Thus we limit the spread of disease from these orifices at least, thus we eliminate the danger of contracting disease from someone else who was not quite so careful.

New and Unofficial Remedies

Emetine Bismuth Iodide: A complex iodide of emetine and bismuth containing from 17 to 23 per cent of emetine and from 15 to 20 per cent of bismuth. It has the action of emetine, but when taken by mouth, it is less likely to cause vomiting than the soluble salts of emetine administered orally. It has been used with apparent good results in the treatment of chronic cases and carriers of amebic dysentery, even where the hypodrmic administration of emetine has failed. The commonly used dose has been 0.2 gm. (3 grains) daily for four days, either in a single dose at the midday meal or in divided doses.

Emetine Bismuth Iodide—Abbott: A brand of emetine bismuth iodide complying with the N. N. R. standards. The Abbott Laboratories, Chicago.

Bismuth Emetine Iodide—Mulford: A brand of emetine bismuth iodide complying with the N. N. R. standards. The H. K. Mulford Co., Philadelphia.

Cachets Bismuth Emetine Iodide—Mulford, 2 grains: Each cachet contains two grains of bismuth emetine iodide—Mulford. The H. K. Mulford Co., Philadelphia.

Creosote Carbonate—S. and G. A brand of creosote carbonate, U. S. P. Schering and Glatz, Inc., New York.

Guaiacol Carbonate—S. and G.: A brand of guaiacol carbonate, U. S. P. Schering and Glatz, Inc., New York (Jour. A. M. A., Dec. 14, 1918, p. 1997).

Benzyl Benzoate: The benzyl alcohol ester of benzoic acid. It lowers the tone of unstriped muscle and has been suggested as a remedy against renal, biliary, uterine and intestinal colic and other spasms of smooth muscle, including angiospasm. Its clinical use is in the experimental stage. The dose is from 0.3 to 0.5 cc. (5 to 7 minims). Benzyl benzoate is a liquid at room temperature, insoluble in water, but miscible with alcohol, chloroform and ether.

Benzyl Benzoate—H. W. and D.: A brand of benzyl benzoate complying with the tests and standards of N. N. R. Hynson, Westcott and Dunning, Baltimore, Md.

Solution of Benzyl Benzoate, Miscible—H. W. and D.: A solution of benzyl benzoate—H. W. and D. in 78 gm. ethyl alcohol emulsified with 2 gm. castile soap. It has the actions and uses of benzyl benzoate. Hynson, Westcott and Dunning, Baltimore, Md.

Diethylbarbituric Acid—Merck: A brand of barbital complying with the N. N. R. standards. The actions, uses and dosage of barbital (first introduced as veronal) are described in New and Non-official Remedies. Merck and Co., New York.

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ORATION ON MEDICINE: MEDICAL STEWARDSHIP AND MEDICAL THERAPY.

By Robert A. Ashworth, Moundsville, W. Va.

In these days of struggle and turmoil when the whole world is turned topsy-turvy trying to annihilate itself, it is quite impossible for any exchange of thought except on the one question—war or conditions caused by war.

Each year we come together with a knowledge that our profession has advanced, "enthusiastic over the achievements of the year" and determined to advance our professional ability to relieve the sufferings to mankind.

Never has there been a time in the history of the world when our profession has made the progress in the art of healing that it has made during the war and never has our profession or any other class of professional men responded to the call of the hour as our profession has responded to the needs of our soldier boys going into the cantonments and onto the fields of battle. They have responded in such a way that President Wilson said in a letter to Dr. Franklin H. Martin, "I am very happy to express to you and through you to the medical profession, my deep appreciation of the splendid service which the whole profession has rendered to the nation from the beginning of the present emergency. The health of the Army and Navy, the health of the country at large is due to the co-operation the public authorities have had from the medical profession; the spirit of sacrifice and service has been everywhere present and the record of the mobilization of the many forces of this great republic will contain no case of readier response or a better service than that which the physicians have rendered." One-third of the best, the gentlest, the most skillful physicians and surgeons of our country in active practice have responded in such numbers that our soldier boys admit that they receive better medical attention at the front than they received at home. The Army and Navy have received medi-

cal men without stint, and we propose that the only limit shall be the necessity of the home folk. The beauty of it all is that so many of them responded when our profession was not receiving the recognizance that it was entitled to receive in the way of commissions and so many of them left luxurious homes and made such financial sacrifice in giving up a practice which took them years to build up. We are glad that our profession now has been recognized with a representative on the Advisory Commission of the Cabinet, and by being given higher commissions in the service. We are inspired by the fact that it is only through the efforts of the medical profession that the prosecution of the war has been possible.

What could our government have done had it not been for our sanitarians and internists, our surgeons and specialists? Using the substance of a paragraph from *Gynecology, Obstetrics and Surgery Journal*, though giving the honor to the medical profession instead of an eminent individual of our profession! "They have directed the building, equipping and manning of the many hospitals of 500 to 1000 beds each in our many cantonments and camps. They have organized special intensive training courses in our great commercial centers and training camps for the Officers' Medical Reserve Corps, have sent out to allies and supplied our own Army with base hospital units, and have examined and will continue to examine our millions now going to the front; but we should remember that as important as we have been to the government, the government has been more important to us for it is fighting to save our practices, our wives and children, and our homes and country. The only way an effective fighting force can be maintained is through vigorous and spotless sanitation and scientific and uncompromising prophylaxis. The Panama Canal could never have been built had it not been for the doctors who conquered the deadly and pestilential diseases of that region. We recall the distressful epidemics that ravaged our armies in the Spanish-American War.

At Chickamauga in 1898 there were thousands of cases of typhoid fever. During the first three years of this war the British, who have furnished many millions of soldiers, have only lost of their number, two hundred and ninety-two from typhoid fever. During the mobilization of our one hundred thousand troops on the Mexican border, there were but a scanty few cases of typhoid, and the usual infectious diseases were tabooed altogether, while typhus fever has never gained a foothold in our Army camps or on the battlefield of Europe. Tetanus is completely prevented by giving prophylactic injections of antitoxin to every person whose wounds are contaminated by dirt or pieces of clothing. Since the war started Drs. Bull and Prichett of the Rockefeller Institute have discovered an antitoxin prepared similar to that of diphtheria antitoxin for the gas bacilli, thus reducing death from the gas gangrene. In a report of 464 cases of gas infection only twenty-five were fatal. In other wars from ten to fifteen men died of disease to one from bullets; in this war one dies from disease to every ten from bullets. Through scientific sanitation and intensive prophylactic treatment the only danger now to the soldier is the bullet and the superior method now of treating war wounds as devised by Carrel and Dakin and others have deprived these wounds of their danger. To paraphrase Dr. Crile, more progress has been made in the treatment of wounds of infections, of hemorrhages, of exhaustion, of splints, and other mechanical appliances in the brief years of

the war than in the past generation.

In giving an account of our stewardship, I wish to mention with great satisfaction that at our meeting at Bluefield, before the state went dry, our association passed resolutions in favor of prohibition and said in effect that we had no diseases to treat in which we could not use a substitute instead of any alcoholic beverages. Now one by one the nations of the world are emancipating their men from alcohol "the greatest curse of mankind." And our states have gone dry one by one since then to such an extent that the whiskey people realize that this nation will soon be dry without regard to the war. We expect our congress to enact national prohibition for the remainder of the war.

The "Social Disease" today is being fought by every conceivable agency. On advice of the physician the government is throwing around our boys Christian influences, education, diversion, protection, isolation, recreation and where this is not sufficient, we use prophylaxis, and our government prescribes penalties and courtmartial. Our boys will learn the truth about this evil and return to us real men, bright eyed, clear cut and clean. When the war is over and our boys return this education will permeate every strata of society and will be a real benefaction to the world.

One of the therapeutical advances of our professional brethren in England and France is in the reconstruction of the cripple. This problem looms large on the medical horizon of our country. Very soon we will have large numbers of our wounded returning to us. There will be men crippled in mind and crippled in body, men with sightless eyes and listless ears, "men without arms and men without legs," men with twisted bodies and disfigured faces, only pieces of men. We shall look on these defects not only as objects of pity, but as badges of honor. We must not suffer these public-spirited citizen-soldiers to be the objects of pity and allow them to sell pencils and shoe strings on our street corners or to go to the soldiers' home, where they spent their time in the "Idle House." All of these will need the care of the medical profession to make them wage earners independent of charity or pensions, or relatives and friends. It is important that we be properly trained in orthopedics, electro-therapy, massage, and manual exercise, and we must be full of enthusiasm, sympathy, and patience for this work. Our profession must be the leading guide in establishing and directing these "curative workshops" and must continually impress upon the disabled the possibilities of the cripple and the maimed. Fully fifty per cent will need to come under our care. The Germans claim to return ninety-five per cent of their wounded to either military duty or self-supporting, civic, or industrial usefulness. We shall not be satisfied with a less per cent of reclamation and re-education of our war-disabled boys.

Before leaving the account of our stewardship, I wish to mention three incidents which makes our blood tingle and us to boil over with enthusiasm and to thank God that our profession heads the list. It is a pleasure and inspiration to our profession that Maj. George W. Crile was the first American to carry Old Glory and the Red Cross Banner to our allies after war was declared. We are inspired by the fact and it caused many of our fellows to say in effect, "Here, Father Abraham, I am; let me take his place, that the first officer in uniform to make the complete sacrifice was a physician, Lieut. Fitzpatrick, and that the first commissioned officer of West Virginia to be cited for bravery

by Gen. Pershing, was none other than our own beloved fellow practitioner, Lieut. Barber, of Charleston, and while we meet here today we honor them for the service they have done our country and our profession.

Modern therapeutical procedures meets with difficulties at this time for the medical profession is still divided concerning the values of certain new methods. Although our government and the vast majority of our profession has accepted the Carrel-Dakin treatment of multiple irrigation of war wounds, some of our professional brothers of England and France are still skeptical, but the concensus of opinion after extensive experiences with this treatment of the worst type of war wounds and other industries injuries is that sodium hypochlorite is the turning point in the treatment of wounds and our highest attainment in wound disinfection. This solution possesses the necessary antiseptic qualities without being irritating to the tissues and only slightly irritating to the skin, or in the words of Dr. Lyle, "It is an antiseptic of high bactericidal and low toxic and irritating qualities." The solution possesses hemolytic properties and will dissolve recent blood clots. This wound disinfectant guards against lymphangitic and lymph-adenitis as well as against osteo-myelitis in infected compound fractures.

Amputations are rarely needed in spite of the gravity of the case, and deaths from sepsis are exceptional. And the scars look like they were made with the operator's knife and not like a granulating wound or a wound after secondary suture. The formulæ best suited for us fellows away from hospitals is as follows:

Sidium carbonate 140 grams dissolved in 12 quarts of tap-water, to which is added 200 grams of chloride of lime. Shake well. In half an hour siphon off liquid from precipitate and filter through a plug of cotton. Forty grams of Borac acid is added to the clear filtrate, making the solution ready for use.

I will now only mention a few other disinfectants containing the hypochlorites, which are used in wounds, and which have been developed as war therapeutical procedures. I mention some of these because of their value and others because of their educational value, so that when our fellow practitioners return from the front, we will be able to discuss them more intelligently, and I hope that my mentioning them will cause some of you to discuss and to bring out some valuable points. I wish to add that I have had no experience with some of this therapy and that I have only read the literature of some of it.

Dichloramin-T in Oil Method or Chlorazene as it is commercially known. This solution is prepared by dissolving paratoleum hypochlorite in chlorinated eucalyptol. The advantages claimed for this solution is that the time for the liberation of the bactercide is extended from minutes to hours, that it is non-irritating to the skin, easier applied, saves time and the pain of wound dressing as well as the dressing material. This solution is of small bulk and has been kept in the dark for more than four months.

Next is a solution of chlorinated potassi known in the commercial world as "Javelle Water," in the treatment of war wounds. This prepared by mixing 80 grams of chlorinated lime with 400 millimeters of waters. Dissolve 58 grams of potassium carbonate in 300 millimeters of boiling water and pour this hot solution into the mixture prepared, shake well, set aside to cool, add water to make 1,000 millimeters, then

filter, and keep in well stoppered bottles in a cool place protected from light. This preparation is used in the proportion of 15 parts of Javelle Water to one liter of water. Five hundred and ten cases of wound infection have been reported from one base hospital treated by this method, including 155 compound fractures and 286 deep wounds of the soft parts with a majority of very extensive lesions with a recovery of 508, or in other words, a mortality of only three.

Eusol and Eupad. Eusol is the name given to hypochlorius acid standardized at 0.5 per cent. The antiseptic value of hypochlorous acid and its application to war wounds was brought out by the pathologists of Edinburgh University. This solution may easily and quickly be prepared by mixing 135 c.cs. of lime water diluted with water, up to one liter, add ten grams of boracic acid and shake until dissolved. Hypochlorous acid used in powdered form made of equal parts by weight of finely ground chloride of lime and boracic acid is called Eupad. By Eusol and Eupad treatments of wounds the bacteria on the surface of the wound seem to be destroyed almost immediately and the lymph flow is so stimulated that the bacteria deeper seated in the tissues tends to flow toward the surface, thus helping the patient to throw off the infecting organism. Frazier and Bates have obtained most gratifying results by intravenous injections of Eusol using from 40 to 70 c.cs. for antotixemia following gas gangrene.

Vincents Powder or Boro-Hypochlorite is considered very valuable for a prophylactic dressing of contaminated war wounds. This powder has the required antiseptic strength and is free from irritative, caustic or toxic properties to the tissues or the patient. This is prepared by pulverizing separately and then mixing 10 grams of dessicated calcium hypochlorite with 90 grams dessicated boric acid run through a fine sieve.

The technique of Vincent's Method is very simple and easy to do. The wound is cleansed with water, which has been boiled and used under pressure. The powder is then freely applied to all recesses of the wound, the skin and the first layer of dressing. Into wounds with a narrow opening the powder may be insufflated with an instrument devised by Vincent. This dressing need not be changed for two days the first time, and four days the second time. By this method drainage is not interfered with and the antiseptic remains for hours in contact with the wound surface giving us a continuous disinfectant.

This is the last of the hypochlorite solution worthy of our consideration. We will now consider Hypertonic Solutions or Lymphogogic Agents. At the beginning of the war a conflict arose between the advocates of the antiseptic or Listerian method represented by Carrel-Dakin and the physiological method represented by Sir Almroth Wright and his followers, who advocates the use of substances which produce a free flow of lymph from the tissues, thereby flushing the wound and diluting the toxins. This "Antiseptic Anodyne Solution" in the hands of Dickerson, Wright and their school used in all sorts of cases, even gas gangrene, has caused the wounds to remain clean, moist and to heal more rapidly than by using any other solution. The form of this solution most all of us know, and need not be given.

The Sugar Treatment of wounds is advocated by some Italian writers. Sugar in a wound increases the flow of lymph by osmotic action and transforms a sep-

tic wound into a healthy granulating surface besides it acts as a food to the tissues. I wish to report a case treated by Dr. Smith and myself at the West Virginia penitentiary four years ago with Horlick's Malted Milk. Patient S., 52 years old, with a popliteal aneurism and a deep ulcer on the calf if his leg the size of the body of a man's hand, no diabetes and venereal history negative. This ulcer was of eight months' duration and we had tried all known methods to heal it, but without results. On this we used Horlick's Malted Milk with brilliant results. The patient complained of a smarting burning pain with the first two or three applications. After this no pain was complained of. Soon this foul, deep discharging ulcer was clean and red and healthy granulations were visible. In a remarkably short time the granulations had reached the level of the skin surface. Then we used a gauze dressing over which a layer of zinc oxide was spread on which we put scarlet red salve to promote the healing of the skin. We thought our success was due to the food and the deoxidizing properties of the carborhydrates. Since that time I have used it in three other cases with brilliant results.

Of the Iodine Group, some few are using Iodated Starch solution for which they claim an antiseptic action like Dakin's solution and more are using Bipp each letter of which stands for the constituents if which it is composed, bismuth, iodoform, paraphine paste. The composition according to Rutherford Morrison and his method is as follows:

Iodoform, 440 grams; Bismuth Subnitrate, 220 grams; Paraphine, 220 grams.

The Bismuth and Paraphine are sterilized by dry heat. The Bismuth having cooled is mixed with the Iodoform in a mortar. The Paraphine is heated to 90 degrees and then added to the mixture. This is best put up in collapsable tubes. After removing all necrotic material and tissue detritus, blood clots and other contaminations from all the wound recesses and after the wound has been cleansed with dry sterile sponges and dried with alcohol using Vilkman's Spoon if necessary, this paste is spread over the wound surface and rubbed in with dry gauze. The wound is then sutured, closed and dressed, then left to itself for twelve days, when healing is expected to have taken place. The skin around the wound is cleansed with a 5 per cent carbolic acid solution. The only objection to Bipp is the slight possibility of absorbing too much iodoform and thereby producing poisoning. Sir Berkley Moynihan in a recent paper on the treatment of wound says, "Rutherford Morrison's method is widely practised in the base hospital of England and is considered by many surgeons to be the most satisfactory of all treatments." In the *British Medical Journal,* Vol. No. 2, 1917, Sir Alfred Pierce Gould says, "This treatment constitutes the highest attainments yet achieved."

In those glad days when our advanced guard reaches Berlin, members of our profession as the last therapeutic act of the war, will be there to prescribe the dose that will change the German mind from the idea that might makes right to the idea that right makes might, and will change that insane delusion of "Gott mit us" to God is with all of his humble followers and when the autocratic political death trap is sprung for the Kaiser, Hohenzollerns and the Potsdam crew the historians will record that the last act of our stewardship during the war was to count their heart beats and say softly, "dead, the world is now safe for democracy."

FOCAL POINTS OF INFECTION PRODUCING TOXEMIA.

DR. H. H. ROBERTS, White Sulphur Springs, West Virginia.

One of the most important factors in the etiology of systemic disease is some focal point of infection.

The absorption of the toxic material generated, as the result of the presence of bacteria and other non-invasive organisms, will produce well-marked local and general symptoms.

Local focal points of infection are sub-acute and chronic sinusitis, infection of the teeth, chronic inflammation of the follicles of the tonsils and the intestinal tract. While there is a well defined toxic condition recognized as having its origin in the intestinal tract, research has not yet demonstrated that there is a special classification of the bacterial organism present.

The focal location of infection may be in various parts of the body and is often unrecognized until serious damage has resulted to the body.

A thorough and careful examination of the body will often reveal a number of points of infection and from such sources, we may have the systemic infection resulting from a number of organisms.

The toxic condition, as the result of intestinal absorption, will differ from the other toxemias, which may be produced by other poisonous toxins or drugs, inasmuch as they are produced at some point of bacterial lodgment.

If more careful study was given to local focal points of infection and a more thorough investigation and search for the cause of chronic disease of the body, many of the acute forms of toxic invasion could be removed and the chronic results prevented, thus avoiding serious complications and incurable conditions.

It has been demonstrated beyond the experimental stage that many of the acute and the majority of the chronic diseases have their origin from the poisonous toxins developed within the body.

With such systemic infections a condition of leukopenia is produced. This condition, by either its direct or indirect effect, will lower the vital resistance and render the patient more susceptible to the contagious diseases.

During the recent epidemic of influenza the depressant effect of the toxic conditions present produced marked leukopenia.

The study and investigation of the exudates from local foci will invariably reveal the presence of various bacteria. In experimenting with various strains obtained from cultures made from focal points of infection, it has been shown that the same disease can be produced in the inoculated animal. Strains made from the exudates of patients with arthritis or rheumatic fever will produce arthritis. Strains made from patients with endocarditis will cause endocarditis to be developed. Strains made from patients suffering with pericarditis, myositis, cholecystitis, chronic arthritis, etc., have resulted in the production of the respective lesions in the experimental animal, thus proving beyond a doubt that many of these diseases have a specific source of development and that the primary source must have a focal point of infection.

It has been proven that in the focus of infection there are strains which seem to have a special affinity for certain tissues and organs of the body, such as the heart, arteries, serous membrane, etc. Another important factor revealed by laboratory investigation is that, the oxygen supply

in the field of the focus is an important means of increasing or inhibiting the development of the toxemia. The increased supply of oxygen will bring about certain characteristic results, while a diminished supply will produce opposite results. This is worthy of note when we consider that many of the systemic diseases are influenced by the oxygen supply. We know that there are micro-organisms which, when introduced into the system, will be infectious, yet they do not have the power of self-invasion. They require inoculation in quantities before they can multiply and cause general systemic infection. This class of pathogenic bacteria possesses the power to produce poisons or toxins rather than the power to invade the body.

The primary focus of the micro-organism is determined by the path of invasion. The toxins generated thereby have an affinity for certain tissues or organs, as shown by the secondary foci or location. Any condition of lowered vitality of any organ or tissue, through lack of nutrition or injury, will render the patient more susceptible to infection and will require less of the toxins to cause systemic or localized infection.

In the chronic diseases the toxins are absorbed slowly. There may be some protective resistance, so that there is a gradual infection which may take years for development, as in cases of arterio-sclerosis and like conditions.

When the normal functions of the body are active, the intestinal secretions, the ductless glands and other vital forces perform their work without interruption. The intestinal secretion prevents the development of bacteria, assisted by a normal stomach, liver and pancreas.

Careful examination of the roots of all the teeth by the X-ray will often reveal pockets of pus that were not suspected before.

A clear radiograph of the facial sinus will often disclose a chronic sinusitis which is a local focal point of infection producing many of the so-called rheumatic conditions. A deep-seated tonsil filled with pockets of pus will reveal many systemic manifestations. The symptom will disappear when the tonsil is removed or thoroughly cleansed.

I do not believe there is another part of the body that is more neglected than the intestinal tract. Many cases with symptoms of gastralgia, indigestion, hypochlorhydria, chronic gastric catarrh, etc., have cholecystitis as the primary cause for the stomach disturbances.

I believe that, as the result of intestinal toxemia, neuritis, rheumatism, nephritis, dyspepsia, cholecystitis, high blood pressure, hardening of the arteries, nervous conditions, especially some forms of neurasthenia, have their origin from intestinal poison. Alimentary glycosuria is frequently diagnosed as true diabetes. Dizziness, mistaken for high arterial tension, acetonuria and indicanuria, is a most constant symptom of intestinal poison. Muscular pains and loss of weight are prominent symptoms. Persistent insomnia is a predominating symptom. Enterogenous cyanosis is often present. The urinary findings are characteristic. Hyperthyroidism and exophthalmic goiter and many other conditions have been attributed to toxic infection received from the intestinal canal.

Micro-organisms entering the intestinal tract are subject to the action of the acidity of the stomach, the alkalinity of the intestines and the bile, also other intestinal bacteria already present. The oxygen supply will furnish one of the conditions whether they are to survive or succumb. Therefore, the mechanical defense of the mucous membrane, the intestinal secretions and the vital resist-

ance will have much to do with the safeguarding of the invasion of infecting microorganisms. If there is impairment of the gastric secretion, if there is deficient bile, if the intestinal secretion is diminished, then the protective mechanism of the intestines is weakened and the invasion of infective bacteria is comparatively easy.

Such an accumulation within the intestines impairs the normal peristalsis. With the normal contractile and expulsive powers of the intestines diminished there will be retention, and with such retention there will be further contamination. The infected intestinal tract not only produces toxic and other poisonous material absorbed to a more or less degree within the body, but this condition also has an injurious effect upon the mucosa and muscular tone of intestines as well. The presence of this infected material within the intestines weakens the structural mechanism, so that there may result a condition of inflammation, or colitis, and perhaps the further state of visceroptosis.

Lliac stasis is a physiological condition caused by activity of the ileocecal sphincter. Any disease within the neighborhood of the cecum which causes insufficiency or muscular spasm will increase the stasis. Loops of the intestines may hang down into the pelvis yet stasis will not result only where such loops may cause a stenosis.

The cecum of transverse colon may be in the true pelvis and yet perfect health be maintained.

Nothing in my judgment is more injurious than the habitual taking of some of the mineral oils. Mineral oils and saline cathartics given in sufficient doses to produce cathartic results are very injurious; not only impairing the stomach and intestinal secretions, but opening up the avenue for more prompt and thorough absorption of the toxins present. Calomel, blue mass, mineral oils, saline cathartics, etc., while producing temporary effect, have no curative results whatever, and only intensify the conditions present and injure the already impaired tract. The continued use of the mineral oils will produce an atony of the intestines. The exudate which surrounds certain portions of the intestinal walls is so tenacious that the most powerful cathartic will not remove it. The small brooklet, winding its way down the mountain side, will affect the boulders in its path in the same way, running over them, running around them, but never through them.

Any impairment or derangement of the gastric and intestinal secretion must be corrected. Visceroptosis, if present, must be corrected by appropriate abdominal support. A course of treatment with the sinusoidal current will be of much benefit in correcting the visceroptosis.

With the proper application of water externally to the gastro-intestinal region, both local and general congestion are markedly improved.

The scientific application of hydrotherapy materially increases cellular protoplasm activity—muscle cells, leucocytes, lymphocytes, etc.

After the source of infection has been removed there is nothing more beneficial for the systemic condition than a course of hydro-therapy at some of the well-equipped Spas or Health Resorts.

Special exercise in the open air, followed by invigorating baths, and dry rubs, diet selected for each individual case, and pleasant surroundings are all conducive to recovery. Sero-bacterins and autogenous vaccines are indicated in some cases and give good results.

We should bear in mind, in the treatment of all chronic conditions of the

system, that the main feature is to remove, if possible, the cause. The system should be fortified and the patient rendered immune against any further infection. This can be accomplished best by teaching our patients the system of rational living, the importance of wholesome food and the value of food. We should impress upon them the importance of having a systemic examination made of the body at least once every year.

THE TREATMENT OF CONSTIPATION, WITH REMARKS ON THE YEAST TREATMENT OF SOME GASTRO - INTESTINAL DISORDERS.

Chronic constipation is such a common affection, and is seen as a secondary condition in so many derangements of the gastro-intestinal tract, and the general effect on it of medication alone is so unsatisfactory, that a host of remedies have been employed for its relief rather than, let us say, for its cure. Many of the drugs so employed, for instance, belladonna, mercury, and to some extent physostigmine, have other, more important, therapeutic indications which render them objectionable for the relief of constipation over extended periods of time. Then again, in the use of drugs or other ingested agents for the relief of constipation, many of these must be increased in dosage in the individual case to make them effective, an objection that can be obviated to a certain extent by change of drug. Notwithstanding the numerous agents that have been used for its relief, constipation, generally speaking, has remained the bugbear of medical therapeutics. As will appear, however, surgery as a routine measure in the treatment of constipation is to be deprecated.

Numerous physical agents, i.e., massage, exercise, proper diet, regular habits, etc., have been recommended for the relief of constipation and with some degree of success in the use of them. A certain number of individuals find the use of these measures somewhat irksome to carry out, or at least inconvenient. At all events, use of them must be frequently supplemented by medicinal agents, which should work as harmlessly and as efficaciously as possible.

Of these agents, cascara sagrada is an old standby; in addition to it, or occasionally as a substitute for it may be used one of the newer laxatives—phenolphthalein, agar (to increase the volume of the feces) and (a medicinal agent used in recent years) liquid petrolatum. Another agent fully as efficacious—if not more so—than those mentioned above, is the common household article, compressed yeast.

It is to be remembered in this connection that every case of chronic constipation should be thoroughly studied from the standpoint of the gastro-enterologist and in some cases even of the Roentgenologist—in fact an X-ray picture of the abdomen is extremely important when there is reason to believe that the constipation is dependent on the existence of kinks or bands. As far as this is concerned, we should not forget that in spite of the recent claim of the surgeons that the field of constipation lies well within their province, the vast majority of the total cases of chronic constipation can be satisfactirily treated by the medical man, especially if he avails himself of well-approved physical and medical measures.

It is well to quote in this connection the following words of Sir William Osler (Principles and Practice of Medicine, 1918). "Captivated by the theories of Metschnikoff, we have been for

some years on the crest of a colonic wave, and intestinal toxemia has been held responsible for many of the worst of the ills that flesh is heir to, more particularly arterio-sclerosis and old age. The seniles and preseniles of two continents have been taking sour milk and lacto-bacillary compounds to the great benefit of the manufacturing chemists! But the fad is passing, not, I hope, to be replaced by one even more serious, in which operation is advised for every case of severe intestinal stasis."

The use of compressed yeast in the treatment of chronic constipation has met with marked success in the hands of Hawk and other physicians (see article by them in *Jr. A. M. A.*, Vol. LXIX; No. 15; Oct. 13, 1917, pp. 1243-1247). In fact in ten cases of constipation in which they used yeast, nine were improved or cured. The tenth case was associated with high intestinal stasis and subacute appendicitis, so that this was hardly a fair case in which to expect a curative action of yeast. In one case the movements became so free that it was necessary to discontinue the use of the therapeutic agent. The cases of constipation varied in duration from a few weeks to several years. Fleischmann's Compressed Yeast was the agent employed. One-half to one cake of yeast, was administered about three times a day, usually before meals. In many cases the bowel movements became regular after only a few days of treatment, sometimes immediately.

The use of yeast in the treatment of constipation was by no means new when Hawk and his co-workers undertook their researches on its action. Gunzberg (*Munchener Med. Wochenschrist,* July 7, 1896, pp. 631-632), recommended small doses of bakers' yeast in the treatment of enteroptosis, stating that one of its good effects was that it enabled the victims of the disease to take on the necessary fat. Aaron (Diseases of the Digestive Organs, etc., first edition, 1915; second edition, 1918) in his chapter on constipation, writes thus about the treatment of atonic constipation: "Good results are reported from yeast taken once or twice a day, according to the number of bowel movements caused."

The full action of yeast on the gastro-intestinal tract is well worth determining. According to Hawk and his co-workers, there is associated with all actions of yeast a general improvement of the patient's general condition. With this accords the statement of Gunzburg mentioned above that the patient takes on fat. It is possible that the general increase in well-being may be associated with an increase in general tone, which in turn may affect peristalsis favorably, and bring about a daily evacuation, as a permanent condition. It is noteworthy in this connection that the chief use of yeast has been in connection with cases of atonic constipation. It, however, does not seem to be contra-indicated in the spastic constipation of enteroptosis (see reference to Gunzburg above), which according to Gunzburg needs oil enemata for its relief.

Yeast has been successfully used in various gastro-intestinal conditions, including typhoid fever, and the gastro-intestinal symptoms of influenza. The work of Hawk already mentioned includes that done on three cases of gastro-intestinal catarrh, in which these were treated with yeast with good results. Favorable reports on the use of yeast in gastro-interitis have long been known, the substance affecting especially favorably the gastro-enteretis of children (see article by Thiercelin and Chevrey, *Revue de Therap. Medico-Chirugicale,* 1899, pp 797-803), to whom it may be given per rectum. On account of its vitamine con-

tent, yeast promises to be of importance in infant-feeding.

APPENDICITIS COMPLICATING PREGNANCY.

AIME PAUL HEINECK, M. D., Chicago Ill.

A review of the French, English and German literature on the subject of appendicitis complicating pregnancy, supplemented by my personal clinical experience, justifies the following conclusions:

1. Appendicitis occurs at all ages and in both sexes. Its frequency is underestimated and its significance not fully appreciated. It presents to all medical men important diagnostic, prognostic and therapeutic features.

2. Appendicitis, acute and chronic, initial, relapsing or recurrent, primary or secondary, complicates pregnancy with greater frequency than is believed. It is often overlooked, misdiagnosed and therefore improperly treated. It is the most important complication of pregnancy.

3. It occurs in single and twin gestations; in first, early and late pregnancies; in primiparæ, deutiparæ, and multiparæ.

4. It occurs at all periods of the child-bearing age and at all periods if gestation. It complicates both intra- and extra-uterine pregnancies and can co-exist with other disease processes to which it may be primary, secondary or co-incidental.

5. Gestation exerts no untoward influence upon the normal appendix. It can and frequently does aggravate existing, or determine new inflammatory disturbances in appendices deviating from the normal in form, length, mobility, location, etc., in appendices, the seat of inflammatory or other degenerative changes or bound down by adhesions, or containing foreign bodies. Pregnancy does not relieve the dangers of appendicitis, but aggravates them.

6. Appendicitis and uni or bilateral tubal pregnancy are frequently mistaken for each other. They may occur simultaneously or consecutively, may be either primary or secondary to, or independent of each other. Appendicitis may hasten tubal abortion through local infection, through general intoxication, may lead to suppuration of hematoceles, of fetal-cysts.

In appendicitis, in ectopic pregnancy and in combined appendicitis and ectopic pregnancy, of obscure symptomatology, it matters not whether you are certain or in doubt as to the real diagnosis, early and timely operative treatment is imperatively indicated. Some cases of appendicitis in which extra-uterine pregnancy was thought to co-exist proved to be cases of appendicitis complicating uterine pregnancy.

8. During gestation, every type of appendicitis may occur; adhesive, catarrhal, gangrenous, ulcerative, obliterative, perforative and suppurative. Pus may be present within the cavity of the appendix, in its wall o raround it. An appendiceal or peri-appendiceal abscess may rupture spontaneously into the uterus, vagina, rectum, through the abdominal wall and into the peritoneal cavity.

9. Appendicitis with adhesion formation is of great significance because adhesions of inflammatory origin are: (a) incarcerate the pregnant uterus in the pelvis and mechanically hinder the enlargement of the uterus; (b) impair the contractibility of the uterus; (c) interfere with uterine labor contractions; (d) entail subinvolution; (e) induce sterility; (f) disturb tubal and ovarian integrity of function and of structure; (g)

determine ileus; (h) produce abortion, and; (i) lead to extra-uterine pregnancy.

10. Infection can and does spread from the appendix to the genital organs by way: (1) of the peritoneum (localized or diffuse peritinitis; (2) of the appendiculo-ovarian ligament; (3) of adhesions existing between the uterus and a perityphlitic pus focus; (4) of the Fallopian tube.

11. Simultaneous consecutive, co-incidental, inflammatory or other degenerative processes of the uterus, tubes, or other pelvic organs may co-exist with appendicitis. The close anatomical relations existing between the appendix and the pelvic organs explain their frequent association in disease processes. It is easy to understand how inflammation can migrate from the appendix to the Fallopian tube, to the pregnant uterus, etc.

12. Appendicitis has a greater morbidity and a higher mortality in the pregnant than in the non-pregnant, operated or non-operated.

13. Appendicitis may or may not terminate pregnancy. The prognosis is good as to non-interruption of pregnancy: (1) When the appendix does not hang in the small pelvis; (2) when the inflammation is limited to the appendiceal mucosa; (3) when it dies not extend beyond the appendiceal wall; (4) when the appendiceal abscess or peri-appendiceal abscess is small.

14. Pregnancy is a serious complication of appendicitis: (1) when the appendix is adherent to the uterus; (2) when it is the seat of an inflammation perforative, gangrenous or suppurative in type; (3) when its inflammation leads to abscess formation, near or distal; (4) when the uterus forms part if the wall of an appendicular, peri- or para-appendicular abscess. In the aforementioned conditions, adhesions may be torn, abscesses may be ruptured by the enlarging uterus.

15. The symptomatology of appendicitis in the pregnant is the same as in the non-pregnant. The clinical picture, however, is blurred by the co-existing symptoms of pregnancy. Mistakes are less likely to occur by keeping in mind that: (a) every pregnant woman is to be examined for physical defects; (b) the history is all important; ask about previous attacks. In cases of relapsing appendicitis in young women, the attacks frequently occur just before or at the menstrual period; (c) in gravid women, all attacks of indigestion associated with vomiting and fever should arouse suspicion and command a careful examination of the abdomen; (d) right-sided iliac pain unassociated with uterine contractions should lead one to think of appendicitis; (e) deep-seated retro-coecal and other abscesses may be detected by rectal examination; (f) peri- or para-typhlitic abscesses may be detected by vaginal examination.

15b. Pregnancy increases the severity and the mortality of appendicitis.

16. The morbidity and mortality of appendicitis complicating pregnancy and the puerperium are the morbidity of delay in applying efficient surgical treatment. The initial symptoms of the attack do not enable the clinician to foretell accurately how a given case will terminate. What is going to happen in ten, twenty or forty hours following the onset of appendicitis cannot be foreseen. When the condition is diagnosed and remedied early, the mortality is practically nil. Abscess formation may be forestalled by early diagnosis and early operation. The high mortality is due to late diagnosis and late operation. The

pregnant woman whose metabolism is good is a good subject for operative measures.

17. The type and the acuity of the inflammation influence the prognosis. The prognosis is good if the changes in the appendix are slight, if the inflammation is limited to the appendiceal wall; if there be slight or no peritoneal involvement, if complications be absent. It is grave in gangrenous, perforative and suppurative appendicitis and in all cases complicated by abscess formation enar or distal, or by diffuse peritonitis.

18. Prognosis is better for the mother if there be no interruption of pregnancy, spontaneous or otherwise. The bad attacks cause abortions and abortion aggravates the illness. In the great majority of surgically treated cases, there is no interruption of pregnancy and when it does occur it is not due directly to the operation. The interruption of pregnancy is not indicated. It aggravates the prognosis.

19. The results for the mother and fetus are better, the less advanced the gestation, the less virulent and widespread the inflammation, the earlier the operation.

20. As far as the child is concerned, prognosis is absolutely good in cases of early operated appendicitis. Severe maternal appendicitis is exceptionally grave for the fetus, who succumbs either through infection or through interruption of pregnancy.

21. The following prophylactic measures are sound and safe and are recommended for general adoption: (a) During the child-bearing age, recurrent attacks of pelvic pain, dysmenorrhea, menstrual and other pelvic disturbances unassociated with objective pelvic findings are not infrequently due to unrecognized appendiditis or sequelæ thereof. In the presence of this etiological factor, the ablation of the appendix is indicated; (b) in laparotomies for conditions other than appendicitis, the appendix should be examined. Should it present any deviation from the normal, its removal is indicated; (c) during the child-bearing age, any woman who has had one or more attacks of appendicitis is treated non-operatively should have her appendix removed so as to correct existing pathological conditions and prevent future attacks of appendicitis and complications incident thereto. Thus prophylaxis in a woman of child-bearing age who has had one or more well-marked attacks of appendicitis is an interval operation. It goes without saying that constipatiin is to be avoided and that other hygienic precautions are to be observed. A definite and accurate diagnosis of acute, chronic or recurrent appendicitis invariably calls for operation, irrespective of the stage of pregnancy. The disease, during pregnancy, runs such a rapid destructive course that delay is hazardous. Operation should be early and immediate. A case may be rendered hopeless by hesitation and inaction. Temporizing methods are extremely dangerous.

22. Treat appendicitis in the pregnant female as you treat it in the non-pregnant. Every pregnant woman who is a subject of appendicitis should be operated on just as soon as the diagnisis is made, whether the attack is the first, second, or third.

The unusual risks of leaving a diseased appendix in the abdominal cavity are much increased by the pregnant state and the evil consequences of another attack, i.e., gangrene or perforation, will be correspondingly greater. The danger of recurrence in the later months of pregnancy and in the childbed period calls for operation, preferably during the attack. If the patient

is not seen in time, one will do the next best thing, an interval operation during the prgenancy. Pregnancy is an additional indication for operation in cases of appendicitis.

23. In inflammatory diseases of the appendix, the ideal operation is appendectomy. In some cases, however, one has to be content with incision, evacuation and drainage of an appendiceal abscess. Exceptionally, drainage of abscesses in Douglas' pouch may be affected through the vagina or rectum. Pus should be evacuated, irrespective of uterine contents and irrespective of its location.

24. It is well to keep in mind that for an appendectomy the median incision is contra-indicated in the later months of pregnancy. that it is best to avoid or to reduce to a minimum, the manipulations of the uterus; opiates are indicated in the after-treatment. Labor when it occurs shortly after a laporotomy is not to be unduly prolonged; it may have to be assisted. When operating for appendicitis in a pregnant woman, every effort should be put forth to prevent miscarriage. Interruption of pregnancy is not indicated as it increases the danger.

25. In all laparotomies for conditions other than appendicitis, if the patient's condition permits, the appendix should be examined and removed: (1) if it be abnormal in length, size or location; (2) if it be in close relation to a pedicle or denuded surface, left by operation; (3) if its cavity be partly or wholly obliterated; (4) if it be the seat of anatomic alterations, club-shaped, thickened, kinked, twisted, strictured, etc.; (5) if it contain foreign bodies, fecal concretions, worms, etc.; (6) if it be adherent, in part or in its entirety, to some normal or diseased contiguous organ or to the abdominal parietes; (7) if it be the seat content or one of the contents of a hernial sac; (8) if it be the seat of cystic neoplastic or inflammatory disease.

26. When in doubt as to whether the case is one of appendicitis, salpingitis, tubal pregnancy or other patholigical conditions, use a supra-pubic median incisian. This incision affords easy access to most of the pelvic contents and though it is not the incision of election for exposure of the appendix, it is a very serviceable incision.

MEDICAL SCIENCE AND THE WORLD WAR.

By AARON ARKIN, M.D., Ph.D.
Prof. of Pathology and Bacteriology, West Virginia University, Morgantown; Contract Surgeon, M. C. U. S. A.

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(*Continued from Last Issue*)

TRENCH FOOT

Trench foot is a disease invited by the effect of cold and inaction on a foot whose vasomotor system is impaired. There probably occurs incomplete spasms of the arterioles of the foot, a disturbance of capillary circulation, devitalization of the skin, and subsequent infection. Gangrene may result if treatment is not begun early. The best treatment thus far consists in the administration of potassium iodide 10 to 30 grains three times a day; use of hot water bottles, boric acid powder and flannel bandages. Daily changing of sox is important.

TRENCH NEPHRITIS

This is a peculiar form of nephritis which has occurred in the trenches. Its cause is at present unknown. The soldier usually develops a general edema,

dyspnoea, albuminuria with casts and blood cells in the urine. In fatal cases bronchitis with pulmonary edema is found. The kidneys present an acute glomerulitis, but not if high grade. Sometimes no visible changes occur. Capillary thromboses may be found, serious hemorrhages; and the lungs show a bronchitis and beginning pneumonitis. Streptococci are often found in the urine. The condition resembles an acute inflammatory process.

TRENCH FEVER

This new disease is now very common in the trenches. It is characterized by a sudden onset of malaise, muscular pain, high fever for several days, often followed by marked jaundice, subcutaneous hemorrhages and other complications. Investigators have found a spirochete in the blood of some of these sufferers and look upon the disease as a spirochetosis, probably spread by rats.

WAR DEFICIENCY EDEMA

This disease is reported to be common among laborers in Germany and Austria. It is said to result from a diet rich in carbohydrates and containing large amounts of water, but deficient in fats. Perhaps it is due to the German's soup diet. There may be a deficiency of the fat soluble vitamins or food accessory substances. The swelling or edema is said to disappear with a fat diet and rest.

"SHELL SHOCK"

The trench is no place for a man with an unstable nervous system. Among such individuals the trench warfare has developed some remarkable war neuroses, known as shell shock, or war shock. They are psychoneuroses, nervous and mental disturbances. One-seventh of all discharges in the British army are for these diseases. About 70% recover, whereas only 25% of recoveries occur among civilians suffering from insanities. The cases may be classified as,

1. Pure exhaustion cases.
2. Mental deficients. These are stupid fellows called "boobs," who are delinquent, forget commands or fail to appear. At the front they are shot for cowardice.
3. Epileptics. These people become much worse when exposed to the horrors of modern warfare.
4. Martial misfits and malingerers.
5. Concussion cases.
6. Cases of hysteria.

We see that there is usually a neuropathic tendency, a locus minoris resistentiae in the central nervous system in these cases. The chief symptoms are the following:

1. Loss of consciousness, stupor,
2. Loss of memory;
3. Motor and sensory changes, paralysis, disorders of gait, tremors, spasms;
4. Dreams, nightmares, maniacal terror, mental disturbances;
5. Disturbances of sense organs: visual disturbances; speech: mutism, stammering, stuttering, etc; hearing: deafness, hallucinations;
6. Cardio - vascular: palpitation, breathlessness, precordial pain.

The treatment consists of,
Suggestion—psychotherapy,
Re-education;
Discipline;
Psychanalysis.

SURGICAL OR TRAUMATIC SHOCK

This disturbance has troubled physiologists for some time and there is at present no agreement as to its cause or treatment. Low arterial blood pressure due to irritation of nerve endings, lowered tone of the vasomotor centre due to low blood pressure and fatigue, respiratory depression, have all been given as probable causes. Recently Cannon and oth-

ers have described a condition of acidosis which may simply be an accompaniment Treatment, including saline injections, epinephrin, etc., is at present unsatisfactory.

WOUNDS

A great amount of work has already been done on the bacteriology and treatment of wounds of modern warfare. Practically every war wound is infected. The low defensive powers due to loss of sleep, poor nourishment, nervous tension and hemorrhages; the fact that clothing, dirt, soil, or other extraneous matter enters most injuries; the length of time before many cases can be given aseptic surgical care, are responsible for the presence of infection in practically all cases.

In the treatment of these wounds we must (1) strengthen the defensive mechanism of the body, (2) destroy or remove the bacteria. Early surgical treatment with removal of all tissue, with little or no blood supply is most important. Tissue reaction appears in five to ten hours. In ten to twelve hours bacteria can be found in the secretions, including the gas bacillus. White blood cells accumulate and pus appears, which is often fetid after 36 hours.

There are two schools of wound treatment; those who practice the open-air aseptic method after surgical removal of all diseased tissue, and (2) those who use antiseptic solutions to sterilize the wounds before closure.

The use of the new antiseptics in war surgery began with the use by Carrel and Dakin of dilute, neutral sodium hypochlorite, 0.48% strength; as an antiseptic for the irrigation of wounds. This substance owes its activity to the liberation of chlorine, an active oxidizing and germicidal agent. It has marked germicidal action, and also can dissolve necrotic tissue, pus, and plasma-clot in the concentration and reaction used clinically. The objections to the Carrel-Dakin method are; first, the solution is unstable, and fresh solutions are constantly needed; second, there is only a small mass of the germicide at any one time; third, the small amount of chlorine combines very readily with the wound exudates; fourth, the technic described by Carrel is very elaborate and complicated and requires painstaking care and expensive apparatus; fifth, the solution is irritating to the skin and other tissues.

To overcome these objections Dakin has prepared aromatic chloramin compounds. He found that hypochlorite solutions react readily with protein and produce with amido group N Cl groups —chloramines—which have a marked bactericidal action and are non-irritating.

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   H                    H
   I                    I
R—C—CO—              R—C—CO
   I                    I
  NH                   NCl
   I                    I
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[*Graphic formulae omitted*—Ed.]

Dichloramine-T contains over 29% of chlorine. It is only slightly soluble in water, but freely soluble in oils such as paraffin oil. Chloramine-T is water—soluble.

These chlorine antiseptics are also deodorants and detoxicating agents, destroying bacterial toxins by oxidation.

In the bacteriological study of antiseptics in wounds we must keep constantly in mind that all bacteria are not equally rapidly killed, the rate of disinfection varies with the nature of the disinfectant and the medium in which it acts. The following conditions must be filled:

1. The antiseptic must come in contact with infecting organisms.

2. There must be sufficient time for action.

3. Sufficient concentration at point of contact.

4. Antiseptic must be sufficiently stable in wound secretions.

5. Substance must be germicidal.

6. Substance must not be highly toxic to tissues.

Dunham has found that the following time is required by the antiseptics to kill staph. aureus culture added to a mixture of blood serum and muscle extract:

Phenol 2%, over 24 hours.

Hydg. Biclo. 1 to 1,000, 7 hours.

Sodium hypochlorite 0.5..... (Dakin's Sol.), 4 minutes.

Chloramine-T, 2%, 5 minutes.

Dichloramine-T (2% in oil) half minute.

The Carrel-Dakin method has been used extensively in the British Army Medical Service with excellent results. They have also employed a mixture called "B. I. P." consisting of 25% bismuth subnitrate, 50% iodoform, 25% liquid paraffin. This has caused cases of bismuth poisoning and nephritis and is rather dangerous.

The new dichloramine-T has been found a valuable aid in the treatment of infected wounds. It is used in 5 to 20% solution in oil. There is little skin irritation, high concentration of antiseptc, and prolonged action. It doesn't require the elaborate and complicated Carrel technic; few dressings are needed which require change only every one to three days. It has a phenol coefficient of about fifty. Furthermore, it doesn't disintegrate catgut as does hypochlorite solution. Wounds are sterilized in eight to thirty days, depending upon nature and extent of the infection.

However, chemical agents can not be depended upon to do in suppurative wounds what can be done thoroughly by surgery.

GAS GANGRENE OR EMPHYSEMATOUS GANGRENE

In 1892 Welch and Nuttall discovered an anaerobic, spore-forming, gas-producing bacillus in cases of emphysematous gangrene. Great numbers of cases have developed in the present war; in some areas 50% of infected wounds contain this germ. This is due to the fact that the soil of France which has been highly fertilized, contains the spores of the bacillus, which is really a saphrophyte. The germ grows on dead muscle or tissue, and the infection travels along the nerves or blood vessel sheaths. Gas may be present in five to twenty-four hours. If seen and treated early results are favorable, otherwise gangrene and death may follow.

One of the greatest discoveries made since the war began was the production by Bull and Pritchett of an antitoxic serum for the prevention and treatment of gas bacillus infections. They found that the germ grown in broth containing muscle tissue produces a very active hemolytic and necrotic toxin. When injected into rabbits or horses an active antitoxin is produced. It neutralizes the toxin and stops the growth of the germ. It is given intravenously in doses of 5,000 to 15,000 units, also injected into the tissues about the wound. In addition to antitoxin treatment, all dead tissue is excised and the wound is irrigated with one of the chlorine antiseptics, which destroy the toxin very readily. The infection can be recognized before gas appears by smears and cultures. If the bacilli are present treatment should be begun at once.

INDUSTRIAL DISEASES

With the great stimulation of certain industries, especially the manufacture of explosives, industrial diseases have in-

creased rapidly. The manufacture of T.N.T., tritro-benzol, numerous aniline compounds, and dye-stuffs, and many drugs in this country has awakened our boards of health to the necessity of industrial disease prevention. Education of employer and employee, recognition of the advantages to both of maintaining employees in a condition of maximum health efficiency, and periodic examinations of workmen will be necessary.

Since T.N.T. poisoning is probably the most common I might mention briefly its chief symptoms. There is usually drowsiness, dizziness, depression, and frequently a toxic jaundice, dermatitis and gastric catarrh are common. Most of the poison is absorbed through the skin and perhaps also by inhalation of the fumes or powder. Some people are more susceptible than others. In fatal cases there is a marked liver injury, a necrosis or acute yellow atrophy. Prevention consists in alternation of occupation, good ventilation, periodic medical examination, and careful personal hygiene.

MILITARY SANITATION

Out of the war will come a great increase in public health work. There will return many men trained in hygiene and sanitation and disease prevention. Surgeons, bacteriologists, X-ray specialists, orthopedic surgeons, psychiatrists, sanitary engineers, and sanitarians will all be developed for disease prevention. To discuss military sanitation would mean to discuss hygiene and sanitation in general. We have already called attention to the prevention of the important diseases. Military sanitation now includes:

Early diagnosis of disease, with reporting;

Isolation of all germ carriers;

Careful handling of all foods;

Purification of all water supplies;

Disposal of all excreta;

Destruction of flies, lice, mosquitos;

Pure milk supply, pasteurization;

Extra-cantonment sanitation and sanitary surveys;

Free vaccination;

Publicity and education;

Personal hygiene — beds, clothing, bathing, etc.

NUTRITION

The proper nutrition of troops is receiving considerable attention at present. The science of nutrition includes something more than the production of energy from fat, carbohydrate and protein. There must be certain salts and certain qualities of protein in the diet, and minute amounts of vitamins or food accessory substances. The chemical composition of the latter is not now known. Like epinephrin which is essential to life and is present in the blood in one part in 100,000,000, so the vitamins in minute amount in milk, fresh green vegetables, and grains are essential to the correlation of the nutritive functions of animals. They are classed as fat soluble and water soluble.

The standard English ration is:

	Field	*Reserve*
Protein	175 gm.	180 gm.
Fat	218 gm.	80 gm.
Carbohydrates	515 gm.	326 gm.
Calories	4,855	2,800
French field ration	3,064 calories	
Russian field ration	4,190 calories	
German field ration	2,801 calories	

The German has no doubt been raised above this figure.

Lastly, I wish merely to call attention to the great need of preparing for the reconstruction, rehabilitation and re-education of disabled men. These men are wards of the government and ought to be restored physically and industrially

to full producing power in the shortest possible time. This program will call for,

1. Medical and surgical treatment of disease and injury;
2. Vocational training;
3. Securing of employment;
4. Medical supervision of the men after return to industries.

We must begin now to prepare for the reconstruction period.

WEST VIRGINIA STATE MEDICAL ASSOCIATION — FIFTY-EIGHTH ANNUAL SESSION.

Martinsburg, W. Va., Oct. 1-3, 1918.

The Fifty-First Annual Session of the West Virginia State Medical Association, held at Martinsburg, W. Va., Oct. 1 and 2, 1918, assembled under peculiar and most adverse circumstances. War was raging abroad, demanding the presence of many of our members, both in field and in camp, while at home the Spanish Flu was outstretching its pestiliferous hand and grasping our entire state in its death dealing grip, preventing many of our number from attending. However, although only about one-third of the usual enrollment were present, the convention was an earnest, enthusiastic and harmonious assemblage. And our host, the Martinsburg Fraternity, was most hospitable in spite of the late transfer of meeting place and the presence of a virulent epidemic of the Flu in their midst.

The opening session was called to order by President Holroyd at 9:30 a. m., October 1, in the Episcopal Parish House, Rev. Henry P. Hamill, D. D., Martinsburg, pronouncing the invocation.

Dr. H. G. Tonkin, Mayor of Martinsburg, then extended a most hearty welcome to the association. He said that while Martinsburg came to the rescue of Harpers Ferry in the time of her extremity, yet they felt that what was Harpers Ferry's loss was their gain. He spoke of Martinsburg not only as a medical, but as an historical, agricultural and industrial center and he wished to welcome us on behalf of all.

To this hearty welcome Dr. A. S. Bosworth, Elkins, responded in a most happy and oratorical manner. He congratulated Martinsburg on her beautiful lands, her magnificent orchards, her towering spires and her great industries, but he warned that these false standards and ambitions crumble and that the real source of her greatness both for the past, the present and the future was her men.

The scientific program was then opened by Dr. M. F. Hamilton, Mannington, who read a most interesting paper on Berkeley Springs: History, Medical Qualities and Report of Cases.

Dr. S. S. Wade, Morgantown, in a graceful manner amplified upon the merits of these waters and urged their more extensive use.

Dr. McCune-Rossa emphasized the curative properties of these springs and urged that the state and government utilize them.

Dr. C. O. Henry heartily endorsed the last suggestion.

Dr. F. L. Hupp, Wheeling, suggested that a committee be appointed to bring this matter to the attention of Governor Cornwell and to the observation of the Surgeon General of the United States and urge the establishment of a Re-construction Hospital at these springs.

Dr. Brown, the next man on the program, not being present, by vote it was decided to proceed with the afternoon program.

A motion was then made by Dr. Jepson and seconded by Dr. Anderson

that Mayo Tolman, sanitary engineer of Charleston, be invited to sit in the session and take part in the discussions. This was unanimously carried.

Mayo Tolman then read a most interesting and instructive paper on The Sanitary Survey as a Basis for Municipal Activity.

Dr. Bloss opened the discussion by commending highly the recent health survey of Charleston and urged it all over the state.

Dr. Jepson criticised the shortness of the paper. He then stated that at the time Mr. Tolman made this sanitary survey of Charleston the mayor of that city came to him and said that if Tolman did not shut up and quit criticising the city they would see the governor and have him put out of office. But Tolman did not shut up and is still in office. Dr. Jepson also urged full time health officers.

Dr. Wade spoke of the emptying of sewerage and privy vaults into streams and urged that such filth be disposed of by scientifically constructed disposal plants located in every town.

Dr. Henry stated that the law says that nothing that destroys life shall be emptied into any stream. Yet it is done. Who is responsible? He urged Dr. Jepson to enforce the law.

Dr. Jepson then declared that there was no law by which he could prevent sewage from being emptied into the streams. He also condemned the physicians for not reporting typhoid fever cases to the health department.

Mr. Tolman then closed the discussion by stating that there was a law with reference to the emptying of sewage and like products into streams but that it was rendered useless because there was no penalty attached and hence it could not be enforced. He urged larger appropriations for the Health Council and then surveys could be made and reports be published and the public would demand better sanitary conditions.

The Association then adjourned for lunch.

The afternoon session was opened by Dr. W. W. Brown, Shenandoah Junction, who read a very amusing paper on The Medical Liar. He declared that lying is universal. It is encouraged by society and it is winked at by the church. Some men are born liars, others acquire the habit, while others have lying thrust upon them. He classified liars as the common liar, the damn liar, the expert liar, the optimistic liar, the physiological liar and the ethical liar. He condemned the last as the worst liar in the bunch. This paper was most interesting and gave lots of food for thought and made one examine himself to see into what class he belonged.

Dr. S. S. Wade, Morgantown, then read a most excellent paper on Lessons Back Home from Army Quarantine. He treated of the epidemics of various kinds which had swept and were sweeping our cantonments and how we could profit from the study of the same.

Dr. S. L. Jepson, Secretary of Health Council of the State of West Virginia, gave a most practical paper on Sanitary Management of the Common Infections. In this paper he gave much valuable advice which can best be utilized by careful reading and re-reading when it appears in the Journal.

Dr. R. W. E. Cole, Charleston, after being extended the courtesy of the meeting presented an able paper on Syphilis in Relation to Venereal Disease Control. He pointed out the prevalence of syphilis in conscripts, the rapid spread, the great dangers, and the necessity of establishing some means of controlling and fighting this dreadful disease.

Lieut. Farnsworth, M. D., opened the

discussion. He said youth does not understand the dangers of this disease and older heads keep silent. But that sentiment must be laid aside. Fifty per cent of all prostitutes are contaminated and communicate the disease. The Surgeon General prefers the elimination of syphilis to that of the wounds received in battle. It is more devitalizing and more dangerous. He informed us that the U. S. has appropriated a large sum of money for the control of this disease and that West Virginia has obtained her share of this by establishing a Bureau of Venereal Disease Control at Charleston and that he has the honor of being placed in charge. He asked the hearty support of the profession in the making of its efforts a success and in protecting the public from this scourge.

Dr. McCune-Rosa inquired about the defrayment of the cost of modern tests and whether clinical diagnosis was all that was required. Also brought up the matter of damage suits instituted by reason of reporting cases to this bureau.

Dr. Bloss brought up the matter of quarantining after a diagnosis is made and a report is rendered. What good would be the former without the latter? He also asked if cases of paresis and locomotor ataxia were to be reported.

Dr. J. R. Caldwell, Wheeling, the next man on the program, was not present and the association adjourned until evening.

The evening session was called to order by President Holroyd, at 8:15, and after a few announcements he called Vice-President O'Grady to the chair.

Major John McLean, M. C. A., Medical Section, Council National Defense, was then introduced. He gave an informal talk on the needs of the army for medical men. He outlined the compensation, what would be expected of a man, the training, and answered all questions with reference to the service. He also told of the origin and change in the standing of the V. M. S. C. and what was expected of a man who joined the latter organization.

After receiving a hearty and unanimous vote of thanks of the association for his presence and his talk, he departed to catch a train for Washington.

President S. R. Holroyd then delivered his address, which was in the nature of a eulogy and a lament at the passing of the Country Doctor. His address was most interesting and of an unusual character and was very much enjoyed by all.

Dr. O'Grady then appointed Drs. Golden, Jepson and Henry as President's Address Committee.

The association then adjourned.

The Wednesday morning session was called to order by President Holroyd at 9:20 o'clock. It was decided to hold both Medical and Surgical Sections together on account of the few present and the absence of many of those on the program.

The Oration on Medicine was then delivered by Dr. R. A. Ashworth, Moundsville, who chose as his subject Medical Stewardship and Medical Therapy.

Dr. Ashworth's oration was a most masterly production and should be carefully read as it appears in the Journal.

Drs. S. D. Hatfield and V. L. Weatherby being absent, their papers were passed over and Dr. E. E. Clovis was called upon and read a most excellent paper on Psychic Treatment of Tuberculosis. In this he most ably pointed out the influence of a patient's mental attitude in obtaining a cure in cases of tuberculosis. He pointed out the merits of a properly conducted sanitarium in producing and maintaining this proper mental attitude.

The discussion of this paper was opened by Dr. Watson of Salem, Va. He opposed the use of morphia in cases

of hemorrhage on account of the tendency to produce pneumonia. He urged as his motto "Scatter Optimism" and the "Inspiration of Confidence in the Possibility of a Cure" in the minds of patients.

Dr. Bloss urged early diagnosis by means of sputum examination, two-hour temperature, rapid pulse and blood pressure tests. He uses emetine and atropine in hemorrhage. He also uses tuberculin.

Dr. Hoffman called the attention to the dangers of fresh air treatment and the unreliability of egg diet.

Dr. Butt recommended rest and pneumothorax in hemorrhage.

Dr. Clovis closed the discussion by stating that he is a crank on rest and favors slow pneumothorax in hemorrhage.

Dr. R. U. Drinkard being absent the meeting was then turned over to the Surgical Section program.

The afternoon session was opened by a wonderful message from the Land of Research brought by Dr. John Rogers, of New York City. His subject was, The Fatigue Diseases of the Stomach and Thyroid. In what seemed almost a weird manner he traced diseases of the thyroid and the stomach to a failure of proper functionation of the sympathetic and other allied nerves through fatigue. He pointed out diagnostic symptoms and remedial measures of drug and surgical nature. We hope later to have his paper in full printed in the Journal.

After thorough discussion and the answering of many questions by Dr. Rogers, the association adjourned to permit the members to take an automobile drive through the great fruit growing districts surrounding Martinsburg, a trip which all enjoyed.

On Wednesday evening at 8 o'clock the association gathered around a most bountiful laden banqueting board spread by the ladies of Martinsburg in the Episcopal Parish House. After partaking of this feast of viands fit for the gods, President Holroyd, in a few words called the attention of the association to the fact that already two of our fellow members, Dr. A. L. Grubbs, Berkeley Springs, and Dr. H. W. Daniels, Elkins, had made the supreme sacrifice for their country and the freedom of the world. The former had died on board ship en route to France, while the latter had been killed by a German sniper while in action on the Western front. He successively called upon Drs. J. R. Reed, C. S. Hoffman, J. Howard Anderson and J. R. Bloss, who in turn, in few, but well chosen words, did homage to the memories of our brothers, who fell victims of our arch enemy in the great struggle for humanity and the universal freedom of mankind.

After extending a heartfelt vote of thanks to the fair ladies who provided the banquet of dainties, the Association adjourned to pursue the Scientific program to its conclusion.

The papers of Dr. Aaron Arkin, Morgantown, on Medical Science and the World War; of Dr. C. L. Holland, Fairmont, on Food and Intervals of Feeding in Infancy, and of J. L. Miller, Thomas, on Vaccine Treatment of Whooping Cough, were then presented to the association.

The program was closed by an able paper on Abnormalities in Conception, by Dr. C. H. Keesor, Wheeling.

The Association adjourned.

REPORT OF THE SURGICAL SECTION, WEST VIRGINIA STATE MEDICAL ASSOCIATION, MARTINSBURG, OCTOBER, 1918.

Called to order by the chairman, Dr. Chas. Hoffman, at 10:30 a. m. Dr.

Hoffman addressed the association as follows. (*Address appeared in January, 1919, issue of the Journal.*—Ed.)

The surgical oration, The Operative Treatment of Fractures, by Dr. C. F. Hicks, was read by title and ordered published in the Journal.

Dr. Chester R. Ogden read a paper on How Shall We Treat the Infected Gall Bladder and Bile Ducts?

Discussion of Dr. Ogden's paper was postponed until Dr. Fulton's paper on Diagnosis of Cholecystitis and Duodenal Ulcer.

Discussion opened by Dr. Hugh Nicholson. Dr. Nicholson said that no hard and fast rule should be adhered to, common sense should be the guide as to whether the gall bladder should be removed or drained.

Dr. Fulton said he regarded it as most unfortunate that the laiety were taking a part in the discussion and demanding that the gall bladder be removed. He believed it a most serious procedure to remove all gall bladders. If diseased they should be removed. Personally he would prefer the chances of two slight operations to one severe one.

Dr. Reed complimented the section on the presentation of two such papers as those of Drs. Ogden and Fulton. Believed them the equal of any, no matter where presented. Said we should move slowly in advising the removal of gall bladders, a second operation is usually a safe procedure.

Dr. Butt believed we should follow the Golden Rule—perform the operation upon the patient that we would want for ourselves. When in doubt he would prefer a second operation. If all gall bladders and ducts presented the text book formation the operation of removal was a safe one. Unfortunately this is not the case as he had demonstrated at the Charity Hospital, New Orleans, upon the cadaver during the past winter. The position of the ducts is most irregular, they are oftimes very fragile and many times very able surgeons have ligated the hepatic or common duct. The attention of the Section was called to two very able articles by Major Selig and Eisendrath. Dr. Hoffman said as a broad general rule the gall bladder should be removed if infected, left if uninfected. Dr. Hupp said acutely inflamed gall bladders should be drained, especially is this true if technical difficulties are present. In all cases examine the pancreas, if diseased drain and drain for months. Do not remove the gall bladder if the common duct is diseased, do not be a mere carpenter, in all cases use judgment and conscience.

Dr. Henry asks why more women have infected gall bladders, more men ulcer of stomach.

Dr. Jeffers expressed the opinion that greater attention to oral asepsis would rob the surgeon of many operations upon stomach and gall tract.

Dr. Golden wishes to enter protest against certain practices of some stomach specialists. Thinks if there is any field for a stomach specialist it is very limited. Has seen some disastrous results follow the waiting policy advocated by stomach specialists of renown. Has seen these patients washing their stomachs, taking soda, etc., while the pathology increased. Dr. Venning said statistics as to ultimate results would greatly help us in knowing whether to remove or leave the gall bladder. Believes that many apparently hopeless gall bladders may recover under drainage. Asks that someone write a paper for next year's meeting based on experience of men doing large amount of this work. Would like to know the number of comebacks after gall bladder surgery. Dr. Bonar said he believed the percentage

of come-backs would be misleading owing to the fact that so many did not return to the original operator.

Dr. Ogden in closing said he had received much inspiration from Eisendrath's paper on anomalies of the ducts. Spoke of seeing a distinguished New York operator lose a patient because he cut the hepatic duct.

Dr. Fulton in closing, answers Dr. Henry's question by saying the mode of life evidently had much to do with it. Men live more rugged lives, eat more meat. Commends Dr. Jeffers' remarks as to care of mouth. Deems it most important to care for the mouth before stomach operations.

At the conclusion of the discussion of the papers of Drs. Ogden and Fulton the chairman called for election of Section officers. Dr. Fulton was nominated for Chairman by Dr. Golden, Dr. Ogden for Secretary by Dr. Hupp. Both were unanimously elected.

Afternoon session, 4:30 p. m., First Baptist Church.

Blood Transfusion with Potassium Citrate Solution, was the subject of a talk by Dr. Venning. Dr. Venning demonstrated the apparatus with which he had recently transfused a very desperate case of typhoid hemorrhage in his own family. Discussion opened by Dr. Waddell. Dr. Waddell said he had done much experimental work in searching for suitable donors.

Evening session, 9:30, Episcopal Parish House.

Dr. F. L. Hupp read a paper on Abdominal Drainage. Discussion was opened by Dr. Reed. Dr. Reed advised that we use rubber for pus drainage, either rubber dam or split rubber tube. If gauze is used iodoform can not be improved upon. Time of removal varies according to character of drainage. If for capillary bleeding remove within twenty-four hours. In infected cases especially if in close proximity to large vessels not until fifth day. Usually shortens tubes within two or three days. Dr. Oates pours in from four to eight ounces of ether in pelvic abscess due to infected tubes, and then drains. Dr. Golden leans to old maxim, when in doubt, drain. Has frequently tried to get away from this, usually with many regrets for so doing. Dr. Fulton likes glass drainage, does not like gauze. Thinks if infected focus is removed there is usually little need of drainage.

Dr. Robert Jeffrey Reed read a paper on "The Baneful Influence of Uterine Displacements." Dr. Thompson believed tight lacing a causative factor, thinks puerperal patients should not be allowed to get up too soon. Believes perineal tears should be repaired within twenty-four hours.

Dr. Linsz classes pessaries as obsolete, thinks their place is on shelf. Believes tampons are better. Dr. Hoffman believes pessaries have a place occasionally. Warns against forgetting to remove them. Relates a case where pessary was left in vagina for three years. Dr. Anderson asked when repair of perineum should be made.

Dr. Reed in closing expressed the opinion that there is still a place for

the pessary, especially after labor is there a possibility of cure if the uterus is held up for a few months. Also in acute cases of prolapse due to a fall. In answering Dr. Anderson's question he would advise that repair be not delayed too long, usually not over two or three months.

Dr. L. H. Foreman read a paper entitled "The Short Circuiting of the Colon and Removal of the Same for the Treatment of Insanity."

Dr. Fulton expressed himself as hoping the surgeons present would *not* take the advice of the essayist and perform colectomies. Looks on colectomy as difficult and dangerous, believes no one should attempt it unless he has had years of preparation under such men as Lane. His personal experience has been most unfavorable. Has a patient who refused the second stage operation and is now carrying around fifteen to twenty pounds of fecal matter.

Dr. White quotes an insanity expert as saying he had never known a cure by colectomy. Says he now has under his care at Weston fifty patients who have been subjected to ill-advised operations.

Dr. Hood said many cases of insanity will recover with no known reason, relates a case which recovered after a fall.

Dr. Hupp said he had followed Lane in his work at Guy's Hospital during 1913 and believes him twenty years ahead of his time. Lane has taught that normally putrefaction never occurs in the small bowel, but passage of the food mas may be delayed as a result of obstruction, then decomposition occurs and toxic absorption takes place. Surgical treatment is indicated only when medical means fail. These include diet, agar-agar, liquid petrolatum, reduced protein intake, bacillus bulgaris, laxatives, exercise, hygiene, suitable belts or corsets. Only 5% of cases should come to operation. To prevent the accumulation of feces Oschner's plan is most excellent. He severs the illeum eight inches from its entrance into the cæcum. Implants the proximal end into the side of the sigmoid and brings the distal end of the illeum through a small McBurney incision in front of the cæcum. Through this the colon is flushed, absolutely preventing the accumulation of feces. Stasis may be due to kinks, bands, either congenital or inflammatory. These can often be relieved by operation without doing the radical colectomy. Is more than ever convinced that many cases of so-called chronic appendicitis are operated upon when the real trouble lies in Jackson's membrane, Jeunesco's folds, sagging colon, ptosis of other organs, adhesions or prolapse. All aggravated by a nervous psyconeurotic state. Dr. Reed believes Lane's conclusions not always correct but thinks he has done some wonderful work.

Dr. Forman in closing said he believed the operation a good one for certain tumors of colon, fistulæ which could not be closed, constipation not amenable to other treatment.

Adjourned at 11:45 p. m.

C. S. HOFFMAN, *Chairman.*
A. V. BUTT, *Secy.*

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., EDITOR
C. R. ENSLOW, M. D.
J. E. RADER, M. D. ASSISTANT EDITORS

Huntington, W. Va., February, 1919

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.
Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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THE NEXT ANNUAL MEETING

At the meeting in Martinsburg it was determined for good reasons, to return to the old time of holding the annual sessions of the Association. That is during the month of May. This is but three months away and it is necessary for us to begin to plan for it. Select the subject for the paper and get started on it. Be sure to write to Dr. Anderson, at once, the exact title. The arrangement of the program is a very great undertaking and it will save much confusion and misunderstanding if our members will give this their immediate attention.

There is another matter in this connection that necessitates our attention, and that is the matter of the payment of dues. In a letter from Dr. Anderson he urges that the Journal continue to remind the local secretaries to collect the dues promptly and forward the same to him. Remember they must be paid before we can correct our Journal mailing list.

The dues for the State Association this year are FOUR dollars, WITHOUT defense, and FIVE dollars WITH DEFENSE. Let me advise you to read the excerpt from Butt's letter in the State News. If that doesn't cause you to

send FIVE before April 1 (as the By-Laws require) I am badly mistaken. This amount does not, of course, cover the County Society dues or that for Fellowship in the American Medical Association.

So remember! The annual meeting is to be held at Clarksburg in May. Your dues are due and should be in the hands of Secretary Anderson by April 1.

GET BUSY.

Now that the war is over, let us adjust ourselves. During the past year and a half the medical profession, no less than all other activities, has had to meet the emergency of war. This in itself was a tremendous professional undertaking, yet in addition we have had to meet and grapple with the epidemic of Influenza. This last would have been a real "man's job" had all of the fellows been home to help us. Even more still was the increased demand necessary because of the speeding up of all lines of industries to meet the exigencies of the moment.

Naturally we could not give much thought to our county societies and so on. In some of the counties no meetings were held for several months, because the men just could not attend. This was only to be expected.

We are beginning to get a breathing spell now. The epidemic is no longer raging and, with peace, many of the men are returning. So we must again take up the medical society meetings and their work.

The war brought to the fore many, many things in our profession. It opened up lines about which we have been dreaming and talking. Now that we have found the opening to these treasure houses, we must continue our forward march.

How much the men who could not go look forward to the time when the fortunate ones come back! Think what they have to bring to us in the way of messages of achievement from the front. So let us resolve to get out our old reliable Lizzy, the County Society, put in a full supply of oil and gas (they "will" run without water) and "crank 'er up." If we clean our spark plugs, she will spark the first lift. How good it will be to ride in the old boat again!

THE BUREAU OF VENEREAL DISEASES.

Dr. Farnsworth, the director of this branch of the State Health Council's work, is making a tour of the state, to bring to the profession a clearer understanding of just what is planned.

To begin with we should know that this is being done by the U. S. P. H. service. That Dr. Farnsworth and Dr. Walker are officers of the Federal Government. The Public Health Service is taking this work up through the existing state boards of health where this is possible.

This crusade is the result of the astounding state of affairs revealed by the reports of the draft boards throughout the country. These reports showed that approximately 30 per cent of the men between twenty-one and thirty-one were infected with syphilis, gonorrhea or chancroid. This is truly a terrible state of affairs. None of us realized how wide spread this was I am sure. The old law did not require that we report patients afflicted with the so-called private diseases. The new rules do.

An effort is being made to secure the co-operation of the physicians and pharmacists in the work of the Bureau. Force to compel this is not threatened for both the director and his associate are men of experience and poise. As such they wish to make haste quickly

and realize that this may be accomplished most readily by letting the men of both professions know what is to be accomplished, how it is to be accomplished and why it is to be accomplished.

That discretion will be used by the authorities is assured. It will take time of course to get results, but if we do not adopt an antagonistic attitude these results will surprise us. Let us say here that where a man is so foolish as to defy the rulings there are "plenty of teeth" to this law and it has the federal government behind it. The laws have just been submitted to the attorney general of the State and the United States. The opinion is supported that ones personal rights and privileges disappear when they render him a menace to the citizenry with whom he comes in contact. That this is just we will admit. Let us do all in our power to facilitate the operations of these activities of the Health Council.

"SAY!"

Do you wonder how I found out that Ogden of Clarksburg was going sailing? Well, it was learned through the West Virginia items in the Cincinnati Enquired for January 12.

This is merely to show how great is the difficulty in securing items for the "State News." Approximately ninety per cent of these items are found in newspapers.

Will not this bring some aid to an editor in despair

ADVERTISERS

Do you always read your Journal from cover to cover If you do not you miss much. Not in any part more than in the pages devoted to our advertisers.

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Go through this section of this issue and note the firms and their products. We will from time to time call your attention in these columns to new advertisers.

State News

Dr. and Mrs. Chester H. Ogden, of Clarksburg, have gone to New York where they will sail for southwestern waters to spend several weeks.

* * *

The State Board of Health held a meeting at Charleston January 9, for the purpose of considering matters to come up at the present session of the legislature affecting the public health. While there they examined four applicants for license to practice medicine. The board is composed of Dr. V. T. Churchman of Charleston, president; Dr. S. L. Jepson, secretary; Dr. J. L. Pyle, of Chester; Dr. W. T. Henshaw, of Martinsburg; Dr. H. E. Sloan, of Clarksburg;; Dr. H. E. Gaynor, of Parkersburg, and Dr. E. H. Thompson, of Bluefield.

* * *

Major Henry D. Hatfield has resigned his commission in the medical corps of the United States Army and the resignation has been accepted. Coincident with announcement of the completion of Major Hatfield's period of service in the

Army it may be said authoritatively that he has re-considered his plan to locate in Detroit, where he has been attached to Base Hospital No. 36, and will continue to be a resident of Huntington.

* * *

Dr. Victor L. Wetherby, formerly of Elbert, is now located at Wilcoe.

* * *

Dr. J. H. Thornburg, of Stow, was a recent visitor in Kenova.

* * *

The following West Virginia physicians have been honorably discharged from the army recently: Lieut. C. F. Mahood, Alderson; Capt. J. B. Kirk, Bluefield; Lieut. C. S. Fleming, Fairmont; Lieut. C. M. Vaughan, Farmington; Lieut. W. C. Camp, Gandesville; Capt. W. F. Crow, Glen Easton; Capt. L. C. Morrison, Milton.

* * *

Dr. Samuel R. Holroyd, president of the state association of Athens, was a recent visitor in Huntington.

* * *

Dr. Hugh G. Nicholson of Charleston, captain in the Medical Corps, who has been stationed at Fort Oglethorpe, has been honorably discharged and has resumed his practice in that city.

* * *

Dr. Horace Fletcher, widely known as an expert on dietetics, died in Copenhagen January 13, of bronchitis after a long illness.

Horace Fletcher was born in Lawrence, Mass., in 1849, and was educated at Dartmouth College. Since 1865 he had been a traveler, author and lecturer. He carried out experiments in the University of Cambridge and Yale University and was the originator of "Fletcherism," a system for the mastication of food. He was a member of numerous health, sociological and geographical societies and the author of numerous books. During the war he was a food economist for the commission for relief in Belgium.

* * *

Dr. Paris L. Gray, who has been located at Coalton, near Elkins, the past two years, with the West Virginia Coal and Coke Company, has located in Elkins.

* * *

Dr. A. M. Fredlock, of Elkins, captain in the M. R. C., has been honorably discharged from the service and has resumed his practice with Dr. Gray, as his partner.

* * *

The Little Kanawha and Ohio Valley Medical Society met at the Chancellor Hotel in Parkersburg, on Thursday, January 2, 1919, the president, Dr. Robert L. Brown, in the chair. Present Drs. Albert, Gaynor, Jeffers, Kunst, Muhleman, Miller, Prunty, Wise, Bush, Price, Camden, Corbitt, Douglas, C. E. Grimm, Stone, and Giltner.

A banquet was held prior to the formal meeting. The minutes of previous meeting were read and approved. It was moved and seconded that the secretary and treasurer be each paid $25 per year for their services in addition to remittance of dues. Carried.

The question of the reduction of dues going to the local society was discussed and it was decided to leave them unchanged and use more money for the general good of the society.

Officers were elected as follows:

President, Dr. R. B. Miller, Parkersburg; First Vice-President, Dr. S. M. Prunty, Parkersburg; Second Vice-President, Dr. C. E. Grimm, St. Marys; Third Vice-President, Dr. E. S. Goff, Spencer; Secretary, Dr. H. A. Giltner, Parkersburg, re-elected; Treasurer, Dr. S. D. H. Wise, Parkersburg, re-elected; Councillors, Drs. E. H. Douglas, Petroleum; W. H. Young, Sistersville; C. L.

Muhleman, Parkersburg; R. P. Camden, Parkersburg; M. R. Stone, Parkersburg.

Dr. Farnsworth, U. S. Public Health Service, then addressed the society on the subject of government venereal work in the state.

There being no further business the society then adjourned.

H. A. GILTNER, *Secy.*

* * *

Dr. Tom A. Williams has returned to Washington after eighteen months in France as Neurological Adviser to the American Red Cross. His comprehensive and systematized observations upon "Disorders of the Nervous System in Warfare" will be published immediately.

* *

Do not forget in paying your dues for 1919 that they are $4 without defense, and $5 with defense. Pay them at once.

* *

Dr. G. M. Fisher, formerly of Old Town and Spring Gap, Md., has moved to Alaska, W. Va., where he will practice his profession.

* *

Dr. F. F. Farnsworth of the United States Public Health Service, addressed the doctors and druggists of Huntington January 14. He gave in detail the plan of the government's offensive against venereal diseases. Dr. Farnsworth is making a tour of the state, accompanied by his assistant, Dr. Everett Walker.

* *

EXCERPT.

Should you so desire you may note that another suit for damages was beaten.

A man came to me with an infected knee joint, temp. 104, soon became wildly delirious. Paid $15, remained weeks. Left with drains (soft rubber strips, through skin, had three letters delivered to him telling him of this and for him to see his physician and have them removed. Now has good, strong leg with some motion at knee. Likely could have adhesions broken up. Claimed to have found a small piece of rubber strip in joint. Sued for $5,000. Beat him.—BUTT.

Medicine

BICHLORIDE POISONING.

Immediately upon being called, the patient is to be lavaged with at least a gallon of water. If cream of tartar is available it should be added in the strength of one teaspoonful to a quart, and at least a pint of this solution should be left in the stomach. Upon arrival at the hospital a Murphy drip is to be instituted at once, the material employed being potassium acetate solution, one dram to one pint. As it has been demonstrated that mercury is present in the bowel, stomach contents and sweat, as well as in the urine, the patient is to receive a daily lavage in order to prevent reabsorption from the stomach, a high colonic irrigation and a hot pack in addition. One quart of cream of tartar lemonade is to be given daily beside full milk diet. Cream of tartar lemonade contains one dram potassium bitartrate dissolved in one quart of boiling water; when cold, add the juice of two lemons and sugar sufficient to render palatable. It is a further advantage to increase the calorie value of this drink by adding an ounce of lactose to every quart.—*Long Island Medical Journal,* June, 1918.

* *

DEFINITE TREATMENT OF PNEUMONIA.

Solomon Solis Cohen (*Canadian Medical Association Journal,* August), divides treatment into general and special. Under the former he includes: An abundant

supply of fresh air, preferably in the open, with due care to preserve the warmth of the body by adequate covering, and if necessary, external heat. 2. All the essentials of good nursing, including rest, proper diet, and the free use of water internally and externally. Copius diuresis is sought. 3. Keeping the thorax warm by poultices during the day and a lamb's wool jacket at night. This may be preceded in early cases by a mild mustard and flour poultice. 4. A due supply of chlorides either by saline infusion, alkaline-saline beverage, or by administration in capsules followed by copious drafts of water. 5. Such additional measures of elimination and alkalinization as may be necessary. 6. Cleansing and relative disinfection of the upper air passages by local applications to the throat and nose of phenol-iodin-glycerin, or silver preparations, or by continuous inhalation of volatile antiseptics, such as ethyl iodide, creosote, chloroform, or terebinthinates. This general treatment represents a groundwork upon which the definite medication is super-imposed. Under special treatment comes first an antitoxic agent. Quinine is given promptly in massive and repeated doses with progressive lessening of the quantity and increase of the interval according to effect; the drug being intermitted when the mouth temperature tends to remain below 102.5° F., and resumed when it tends to rise above 103°. This medication may be kept up for one, two, or three days. There may be only one dose, or as many as fifteen. The rule is effect, not quantity—enough and no more. Quinine and urea hydrochloride, twenty-five to fifty per cent. solution by intramuscular injection through the iodized skin, is on the whole the most effective preparation and method, but other quinine salts are used. Next are pressor agents. Cocaine hydrochloride, caffeine sodiosalicylate, adrenaline, and posterior pituitary principle, are used singly or in alternation or rotation when necessary to maintain the line of systolic blood pressure at or above the level of pulse frequency. The pituitary principle has the additional advantage of tending to prevent tympanites and dilation of the stomach. Usually a precautionary injection of cocaine, or of posterior pituitary solution, is made with the first injection of quinine, since the latter tends to lower blood pressure slightly. It is repeated every third hour, or as needed. In some cases as many as sixty doses have been given, in others from three to ten, in some none at all. Next come the cardiants, camphor or digitalis in full doses, to regulate the diastolic blood pressure and respiration. Sometimes both of these agents are employed, but in the majority of cases neither is needed. Digitalis effects can be obtained more readily when the patient is under the influence of quinine than in other cases. Care must be taken with both pressor agents and cardiants not to exhaust by overstimulation. One must be neither too bold nor too timid. Oxygen sometimes is helpful. Auxiliary and symptomatic measures include wet cupping, dry cupping, venesection, and the continuous or occasional use of oxygen, alcohol, strychnine, atropine, opium, musk, creosotal (ammonium carbonate), and other drugs reserved for special indications which may or may not be present in any given case. Cases calling for early bleeding are not often seen, but late bloodletting to relieve the right heart is called for occasionally, and may prevent death from pulmonary edema if done in time. Tincture of ferric chloride is given when the quinine is withdrawn, and is continued during convalescence. In prolonged cases with extensive lesions, in certain cases of tardy defervescence, and in all cases of

delayed resolution after defervescence, an autogenous vaccine is used in progressively increased amounts at appropriate intervals under the guidance of temperature and leucocyte reactions. The early employment of bacterins does not seem to be advisable or beneficial. In all features of the treatment there must be a careful adjustment of means and measures to the special needs of the particular patient at the moment. We must not only know when and how to use medicines, we must also know when to withhold them. All of the measures are not to be used in every case, in most but one or two will be needed, but in some several will be indicated. Routine is inferior to discretion. Too much is worse than too little, but too little is not good, the aim being to be just right.

* *

INFLUENZA PNEUMONIA.

Douglas Symmers, New York (*Jour. A. M. A.*, Nov. 2, 1918), calls attention to the resemblance between the lesions in influenza pneumonia and those of the pneumonia of bubonic plague. He has had occasion during the present epidemic to investigate by necropsy twenty cases of death from influenza pneumonia, occurring in the Willard Parker and Bellevue Hospitals. The changes in the lungs he says, are those of a variety of confluent lobular, exudative and hemorrhagic pneumonia in which the naked eye and microscope features so closely resemble those of the lesion in a pneumonic variety of bubonic plague as to provide an interesting study in similarities. There are, however, several features differentiating the two diseases on anatomic grounds. If these should be inconspicuous or absent the pathologist might be in doubt, were it not for the aid of modern bacteriologic methods, as to whether or not he was facing a milder form of bubonic plague. To the criticism that the otherwise harmonious comparison is violated by the projection of superficial buboes into the picture of bubonic plague and their absence in influenza, it may be replied that the pneumonic variety of plague is seldom accompanied by the bubonic manifestations from which it takes its name. As far, however, as the deeper nodes are concerned, the extent and distribution of thoracic and abdominal adenopathies in both diseases bear out the analogy. The similarity of the two diseases is enforced by the clinical features, which are remarkably alike in many respects, and by the pathology of certain tissues other than the lungs. It is a satisfaction, however, that the bacteriology of the present epidemic has nowhere shown the *Bacillus pestis* to be present as a causal factor. In the majority of the necropsies of pneumonic cases in the present epidemic, Symmers' experience is that the pleural cavities are free from excessive fluid accumulation. Only two exceptions were observed, and in one there had been a long standing empyema preceding the influenza. In the second case both pleural cavities were half filled with serofibrinous exudate, extensively obscuring the pleural membrane. In still two other cases, the pleuræ showed only a small patch of fibrinous exudation. In the other seventeen cases, the pleuræ were smooth and devoid of exudate. It is important to note here that in this regard the pathology of bubonic plague is different, extensive pleural exudates having been found by MacCallum and Cole in every one of twenty-five necropsies in Manchuria. The naked eye appearances, however, are very suggestive and are thus grouped by Symmers: "1. Cases with (a) extensive confluent lobular solidification of the lower lobes; (b) circumscribed or partially confluent consolidation of the lobules of the upper

lobe, and (c) areas of acute vesicular emphysema. These cases without exception represented examples of rapidly fatal pneumonia. 2. More prolonged cases characterized by complete or almost complete consolidation of all or most of the lobes of both lungs, areas of acute vesicular emphysema occurring as an inconspicuous feature. 3. Those cases in which the pneumonic process is obviously subsiding.'' The pathologic findings in acute cases are described, such as the involvement of the lower portion of both lungs, the bluish consolidation, and practically constant petechial hemorrhages. The characteristic microscopic findings, etc., show a marked resemblance to those in bubonic plague as described by Crowell. The almost complete consolidation of the lung was observed in several of the more prolonged cases. One opportunity was given to study a lung where the pneumonic process was apparently subsiding. The patient had died suddenly after returning to work at an ill-advised moment of convalescence. Microscopic examination of solidified patches in the lungs revealed intense congestion of the inter-alveolar capillaries with dense collections of leukocytes in the air vesicles and smaller bronchi. Symmers calls attention to one case where the lung changes were the same as those described by Delafield and more recently studied by MacCallum, as constituting an acute productive pneumonia. This is fairly common as a sequel of measles, and according to MacCallum and Cole, is caused by a hemolytic streptococcus. The circulatory symptoms were numerous, and are described somewhat in detail. They are important as indicating the need of stimulation as soon as the diagnosis is made, and are believed to be present at the earliest moment of infection. The microscopic findings in the kidneys, brain, liver and duodenum and spleen are also described. The observation of Ball that pregnant women are liable to abort in influenza was confirmed by Symmers' experience. This subject is being investigated and will be reported on later.

* *

SCOPOLAMINE-MORPHINE AMNESIA IN LABOR.

W. R. Livingston (*American Journal of Obstetrics,* October, 1918) reports 275 cases of delivery under scopolamine-pantopon amnesia by the Gauss method. There was no maternal mortality nor any immediate mortality among the newborn. One child in the series was stillborn and one died on the eighth day. Among the disadvantages of the method are its rather exacting requirements. Its best results will be obtained in properly equipped hospitals. Quiet must be secured, and this means a separate delivery room, well isolated, either by position or padding. A skilled attendant must be in constant attendance with each patient during the whole of the delivery and for two hours subsequently. The dose of the drugs is still a matter to be decided for coch individual patient; the physician must therefore be present or within call throughout the amnesia. The method is not genearlly suitable in cases in which delivery is expected within two huors. Among the advantages to the mother are: Heart lesions are saved the danger of muscular effort and exhaustion; borderline pelvic contractions are allowed the full test of labor with a minimum of exhaustion; the mother knows throughout pregnancy that labor will be practically free from suffering; the cervix dilates with less trauma, and the first labors more rapidly; use of high forceps is relatively infrequent; afterpains are absent or of lessened severity; breast engorgements is less; there is absence of shock postpartum, together with

absence of muscular soreness and exhaution; convalescence is more rapid. In regard to the child, the advantages are that more babies are born alive and that they have a better start in life because of the better mental and physical condition of the mother and the relative absence, in the milk, of the toxines produced by prolonged suffering and physical exertion.

Surgery

TECHNIC OF INFECTED WOUND CLOSURE.

Fraser B. Gurd, (*Lancet,* May 25, 1918), has perfected a technic for the treatment and closure of infected wounds as exemplified by compound gunshot fractures in home hospitals. In cases with acute suppurative cellulitis with sloughing, the wound is excised and cleansed, the inflamed area is incised and the Carrel-Dakin treatment instituted. The dressings are changed daily, or less often as the need indicates, and the early changes are best done under an anesthetic to permit of incision of pockets and removal of dead tissue. When the necrotic tissues have separated or been removed and suppuration has been reduced, the treatment is changed. Then the surface of the wound and surrounding skin are cleaned with soap and water, bathed with alcohol, dried, and an excess of Morison's Bipp is applied to the whole wound surface and worked into all pockets. Gauze wrung out of liquid petrolatum and containing in its centre some Bipp, is placed in contact with the tissues everywhere. This dressing is changed from once in five to once in fifteen days. When the wound is granulating well and discharging little, and the surrounding zone of edema and hyperemia has disappeared, approximation of the skin edges is begun. Deep mattress sutures of heavy silk, smeared with Bipp are inserted and tied over rubber tubing or buttons to protect the skin. These are placed from two to four centimetres from the edge of the wound and drawn tightly enough to make continuous traction on the tissues. They cross the wound over a paraffined gauze pack, and the wound is dressed with alcohol or Dakin's solution. This dressing is changed at six to twelve-day intervals, and each time new sutures are inserted to further close the wound. The skin edges are undercut as they approach one another to prevent invagination of the scar. At each dressing also the bone ends are carefully examined and the Bipp pack brought into close contact with them. Loose or white parts of the bone are removed and after six weeks all ends not covered with healthy granulations are taken away. The opening in the soft parts should be kept larger than the affected bone area until this stage is reached. When the bone is covered with healthy, velvety granulations, the scar tissue in the soft parts is cut away and the wound is closed tightly with silk mattress sutures after thorough application of Bipp to its whole surface. Where sinuses alone remain after compound fractures, these should be treated by passive hyperemia, beginning with periods of five minutes of gentle pressure, and increasing until two half-hour periods in one day are not followed by fever above 99.4° F. Then, if the sinus does not close, it should be excised en masse, including as much of the scar tissue as possible, while still permitting closure of the wound edges. The resulting wound is treated by Morrison's technic and closed, using mattress sutures in layers. The application of these methods has shortened the duration of treatment in cases of this type, is economical of dress-

ings and the surgeons' and nurses' time, spares the patient much pain, permits continued immobilization, and gives excellent functional results.

* *

THE TREATMENT OF ELBOW FRACTURES IN THE CHILD.

(Contribution a la therapeutique des fractures du coude chez l'enfant). *Paris chirurg.*, 1917, ix, 595.

After having adopted the habitual method of reduction and immobilization in flexion of elbow fractures in young patients, Mayet has been struck by the real difficulties which he met in order to restore the integrity of functioning of the elbow-joint after the removal of the immobilizing apparatus. He therefore commenced his treatment by trying reduction in extension. It seemed to him infinitely superior.

At the end of ten days the elbow is placed in flexion. This second procedure is perfectly easily accomplished. After a second period of immobilization in flexion, the limb being again set free, Mayet has been surprised to observe that articular functioning was constantly effected with extreme ease and that total recovery of movement was very rapidly obtained. The method is simple; it is easily applied. Reduction in extension is particularly easy when the amount of displacement is not great, when assisted by radiographic control.

He has operated in 35 cases. Eighteen of these were supracondylar transverse fractures; eight were fractures of the internal condyle with greater or lesser participation of the trochlea; seven were epitochlear fractures; two were fractures of the upper part of the radium. In the eighteen transversal fractures all have recovered the normal movement of the elbow; in five for some months extreme flexion was impossible. Two of these later seemed to have recovered full flexion. The eight condylar fractures gave satisfactory results within a month after the withdrawal of apparatus. The epitrochlear and radius fractures have given completely satisfactory results.

Mayet considers that his results are much superiod to those obtained from the method of plaster cast in flexion.

* *

FRACTURES OF THE PELVIS AND RESULTING INJURIES TO THE URETHRA AND BLADDER.

Sixty per cent of pelvic fractures are complicated by injury to the urethra or bladder or both.

Symptoms of pelvic fracture may show no deformity; there will be shock, manifested by pallor, an anxious expression of countenance, feeble pulse, cold clammy skin, weak voice and insecurity on the injured side when attempting to stand, usually with some outward rotation of the limb. Deformity may be obscured by evtravasation of urine in the tissues.

An x-ray should be taken, as sometimes the injury is mistaken for a dislocated hip, and in manipulating the bowel, the bladder or urethra may be wounded. If there is no deformity, no attempt should be made to reduce the bones. If urine is extravasated into the scrotum, perineum or over the abdomen, this should be immediately relieved.

Rectal examination should always be done. The patient should be moved carefully and placed on his back on a firm mattress or fracture bed; if more comfortable on the side, he should be allowed to assume that position. The legs should be drawn up and supported on pillows. The patient should be kept on his back for four weeks and in bed for six weeks. The bowels are evacuated on a rubber sheet and not elevated to a bed pan.

In ruptured urethra it is often neces-

sary to do a retrograde catheterization in order to find the end of the urethra nearest the bladder.

It is important to make a suprapubic incision, because it enables one to find the torn ends of the urethra; it tells exactly where to make the perineal incision with the least invading of tissues; it shows whether the bladder is torn or injured, and if any urine is extravasated; any rupture of the bladder is visible; the ends of bones may be better replaced. —MITCHELL, H. C., *Illinois Med. Jour.*, 1918, xxxiii, 107.

* * *

THE CHLORINE ANTISEPTICS IN CIVIL HOSPITAL USE.

The conclusions after four months' use of chlorine antiseptics at Bellevue Hospital are as follows:

The establishment of the Carrel-Dakin technique presents no undue difficulties.

The results obtained in military hospitals abroad can be duplicated in general civil hospitals in traumatic cases.

These antiseptics are not so efficient in controlling spontaneous infection.

Reasonable care prevents skin burns in all circumstances.

Dichloramine-T in either chlorinated eucalyptol or chloracosane is not a completely sufficient substitute for sodium hypochlorite solution.

The technique was entrusted to a special group of doctors and nurses and strictly adhered to. Cases upon which the treatment was used were fractures, deep-seated infections, and superficial infections from burns. The progress of cases was followed by bacterial count of the wound, which was more accurate than depending on observation only.

Suppuration was controlled quickly in traumatic infection, but in burns and cases of infection from within, such as osteomyelitis, tenosynovitis, empyema, abscess of the lung, and abscess of the liver, it does not exert such an influence because the infective organisms are more deeply placed in the surrounding inflammatory zone.

No trouble was encountered from skin irritation. The surrounding skin was protected with vaseline gauze as described by Carrel.—J. A. HARTWELL, *Ann. Surg.*, Phila., 1918, lxvii, 385.

* * *

RESULTS OBTAINED BY TONSILLECTOMY IN THE TREATMENT OF SYSTEMIC DISEASE.

Layman advocates the early removal of the tonsils as a prophylactic measure. He sent a questionaire to a number of laryngologists and internists and the consensus of opinion bore out his contentions. He quotes from La Fetra that children whose tonsils have been removed are much less susceptible to respiratory and gastrointestinal disease. He has noted no cases of mal-development from early tonsillar removal and measles, scarlet fever and whooping cough in these children take a milder course.

The relationship of focal infections to systematic disease was first pointed out by laryngologists in connection with the tonsils. He tabulates, from his questionaire, a list of very favorable results from tonsil removal in arthritic and cardiovascular conditions. Thyroid infection seems to be very favorably influenced by tonsillectomy. Some men of experience in thyroid work, notably Crile and Halstead and the Mayos, operate upon the thyroid first and later remove the tonsils to prevent a recurrence of hyperthyroidism.—DANIEL W. LYMAN, *M. D., The Laryngoscope*, Feb., 1918.

* * *

THE TREATMENT OF INFECTED SUPPURATING WAR WOUNDS.

If it is possible to get to the bottom of an infected wound so that it can be thoroughly cleansed mechanically and suit-

able antiseptics applied, the wound can then be closed with interrupted sutures, always with impunity, and many times with the prospect of seeing it healed when the dressing is removed for the first time at the end of three weeks. This is a new surgical principle which will not alter, though details of the method will.

The technique is summarized as follows:

1. Under an anæsthetic, usually open ether, cover the wound with gauze wrung out of a 1:20 carbolic acid solution, and clean the skin and the surrounding area with the same lotion.

2. Open the wound freely and, if possible, sufficiently to permit inspection of its cavity. A guide (the finger is best if the size of the wound permits it, and if not, a thick probe) should be introduced to the bottom of the wound and held so that it is fully exposed.

3. Mop the surrounding skin and the wound cavity with methylated spirits and dry it.

4. Fill up the whole wound with "bipp," rub it well in with dry gauze, then remove all excess, leaving only a thin covering over the wounded surface. Dress the wound with sterile gauze and cover all with an absorbent pad, which is held in position by sticking plaster and a bandage. This dressing requires no change for days or weeks if the patient is free from pain or constitutional disturbance.

Redressing is very simply done. After removal of the old dressings, the wound is covered with a dossil of wool soaked in spirit and the sticky discharge is wiped off the surrounding skin until the skin is clean.

Necrosis of the bone is one of the end-results of sepsis. A separated portion of bone will live and take its part in repair if infection of it can be prevented. This can be done by the author's method of treatment and the consequence is that the majority of the recent fractures show no necrosis at all.—*Int. J. Surg.,* 1918, xxxi, 33.

* * *

TREATMENT OF WAR WOUNDS OF THE LIMBS IN A TERRITORIAL HOSPITAL.

In the territorial hospital of Bologna, during eighteen months Magni has treated 3,618 war injuries of the limbs. He has followed the methods of the old surgeons of the sixteenth and seventeenth centuries, notably Magati, who advised as little interference as possible with a gunshot wound after its initial treatment, not even to remove the first dressing for a long time unless under special indications. Movement, according to this old authority, is one of the most frequent causes hindering recovery, which is the work of nature and not of the physician. Although the teachings of Magati had a large following, they fell into disrepute. Magni points out that the best results today are being obtained from the application of Magati's principles of immobilization and and abstention from meddlesome interference.

Of the 3,618 limb wounds treated, 2,373 were wounds of the soft parts alone, 820 were fractures, and 425 were articular lesions.

In the treatment of fractures, Magni uses plaster casts. He does not remove bone chips, as he thinks, contrary to other expressed opinions, that a bone fragment provided with marrow is a point of permanent ossification, and even if it should die, it is eliminated or absorbed. He only removes projectiles if they are easily accessible or cause prolonged inflammation.

Articular lesions Magni generally treats by immobilization alone and has met with very satisfactory results. Only in a few cases was he obliged to inter-

vene surgically. He thinks emphatically that immobilization is the best treatment for articular lesions.

Only three amputations were necessary, and among the total 3,618 cases there were only eight deaths.

In summing up his observations Magni thinks that none of the more recent methods of treatment are so satisfactory as that instituted by the early surgeons, i.e., reduction, retention, and immobilization of the limb in a good position by a plaster apparatus. These methods not alone help to prevent the spread of inflammatory processes which are generally located in the traumatized points, but they overcome them either directly or indirectly by favoring the formation of a circumscribed purulent collection which tends toward recovery after incision and drainage.—*Chir. d. organ. d. mov.*, Bologna, 1917, i, 325.

A STUDY OF EMPYEMA.

One good result, for medicine, which has come out of the war, has been the opportunity to make intensive studies of certain diseases, under conditions which could not be obtained in civil life. The patients are under the complete control of the surgeon, who is in a position to command implicit obedience on their part and to keep them under observation to an extent which could not be done except under military discipline. A study of empyema cases at Camp Doniphan has been made by a surgeon, an internist, and a laboratory worker, which throws some interesting light upon this particular complication. The results of this study, made by Major Ingraham, Capt. Roddy, and Capt. Aronson, as published in *Surgery, Gynecology and Obstetrics*, for December, bring out several interesting points. These show the presence of Streptococcus hemolyticus in the tonsils and nasopharynx of normal individuals in abnormal quantities during the prevalence of the streptococcus pneumonia and empyema. The organisms do not appear in the blood until late in the disease and their presence is a most unfavorable indication. Agglutination reactions are of no diagnostic value. Measles do not seem to be a predisposing factor. Prolonged illness, undue exposure to cold, and unusual fatigue, causing a marked reduction in the normal resistance, are the most conspicuous factors in the causation of the disease and there seems to be evidence of direct transmission of the infection from one person to another. The studies made offer no light as to the treatment, for the disease was not influenced by any form of medication, not even serum treatment. Rest is insisted upon in all cases of streptococcus infection and this, with a maximum nutrition, early recognition of empyema and speedy delivery of the patient to the surgeon is the most that the physician can do. A few cases tend to spontaneous recovery and a small group recover after repeated operations. The patient's chances of recovery are apparently aided by early operation. Resection of the seventh or eighth rib, is the operation of choice. Ether is preferred as an anesthetic, only a small quantity, about two ounces, being required. The use of the Carrel-Dakin solution was not beneficial. Altogether, the results of this study are extremely interesting.—*N. Y. Med. Jour.*, 1-11-19.

AMERICAN MANUFACTURE OF SALVARSAN.

The Federal Tarde Commission has entered orders for the license of three firms to manufacture and sell salvarsan under the American name of "arsphenamine." The control of standards and quality of product will devolve upon the Federal Public Health Service. The

three firms to be licensed, are the Dermatological Research Laboratories of Philadelphia, the Takamine Laboratory of New York, and the Fabwerke Hoechst Company (Herman A. Metz Laboratory) of New York. The original patent was issued to Paul Ehrlich and Alfred Bertheim, both Germans. It is announced officially that some of the licensees in this country will supply the drug at the price of one dollar per dose to the Army and Navy, $1.25 to hospitals, and $1.50 to physicians.

An interesting comparison lies between the action of Ehrlich in patenting salvarsan, and the action of the discoverer of phthalin in also patenting his discovery, but in vesting all rights to the patent in a university with the special object of making it universally available and at the same time of turning to beneficient and scientific purposes any financial gain to be derived from it. The Principles of Ethics of the American Medical Association succinctly state, "It is equally derogoratory to professional character for physicians to hold patents for any surgical instruments or medicines." The German Ehrlich profited by his salvarsan patent. The American Robertson demonstrated again the prevailing spirit of service and social efficiency with characterizes American medicine and science. —*Cal. State Jour. of Med.*

New and Unofficial Remedies

Diethylbarbituric Acid—Merck Tablets, 5 grains: Each tablet contains 5 grains of diethylbarbituric acid—Merck. Merck and Co., New York.

Sodium Diethylbarbituric Acid — Merck: A brand of barbital sodium complying with the N. N. R. standards. The actions, uses and dosage of barbital sodium are described in New and Non-official Remedies. Merck and Co., New York.

Sodium Diethylbarbituric Acid — Merck tablets, 5 grains: Each tablet contains 5 grains of sodium diethylbarbituric acid—Merck. Merck and Co., New York (Jour. A. M. A., Dec. 28, 1918, p. 2153).

NEW REMEDIES APPROVED BY COUNCIL OF PHARMACY AND CHEMISTRY

Dr. J. R. Bloss, Ed.,
W. Va. Medical Journal,
Huntington, W. Va.

Dear Doctor: During December the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with new and non-official remedies:

Non-proprietary articles: Benzyl Benzoate, Emetine Bismuth Iodide.

Abbott Laboratories: Emetine Bismuth Iodide—Abbott.

Hynson, Westcott and Dunning: Benzyl Benzoate—H. W. & D., Solution of Benzyl Benzoate, Miscible—H. W. & D.

Merck & Company: Diethylbarbituric Acid — Merck, Diethylbarbituric Acid—Merck Tablets, 5 grains; Sodium Diethylbarbituric Acid—Merck; Sodium Diethylbarbituric Acid—Merck Tablets,

H. K. Mulford Co.: Bismuth 5 grains. Emetine Iodide—Mulford; Cachets Bismuth Emetine Iodide—Mulford, 5 grs.

E. R. Squib and Sons: Chlorinated Eucalyptol—Squibb.

Takamine Laboratory: Arsaminol; Arsaminol 0.1 gm. tubes, Arsaminol 0.2 gm. tubes, Arsaminol 0.3 gm. tubes, Arsaminol 0.4 gm. tubes, Arsaminol 0.5 gm. tubes, Arsaminol 0.6 gm. tubes.

Yours truly,
W. A. PUCKNER, *Secy.*
Council on Pharm. and Chem.

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HOW SHALL WE TREAT THE INFECTED GALL BLADDER AND BILE DUCTS?

Chester R. Ogden, M.D., F.A.C.S.,
Clarksburg, W. Va.

Read at Annual Meeting of W. Va. Med. Assn., Martinsburg, October, 1918.

The question asked in the title of the paper would indicate that there is still an unsettled opinion among medical men as to the manner of dealing with the infected gall bladder and billiary ducts—whether the gall bladder should be removed or drained; and, in doing either, what form of procedure should be followed.

Modern methods of diagnosis and the facilities of the present day for successfully performing a laparotomy or an exploratory operation on the human body are proving the presence of infected gall bladders and ducts, with or without stones, in many cases which heretofore were overlooked by the profession or regarded as vague and uncertain symptoms of dyspesia, indigestion, gastralgia, neuralgia of stomach and other affections.

In the last two decades the profession has been alert in the recognition of appendicitis and other distressing pathological conditions of the lower abdomen, and is now showing increased and a correspondingly active interest in the recognition of the common, and, too often overlooked, gall bladder disease.

It is not the purpose of this paper to deal so much with the symptomotology, or the causation of infection of the gall bladder and the bile ducts, as with the manner of their treatment. It is, however, difficult for one to abstain from trespassing on the ground of causation and symptoms of these now frequently existing conditions which are interesting so profoundly the profession.

I will say, therefore, that stones in the gall bladder and ducts, or, infections which ultimately lead to the formation of stones, are becoming much more commonly recognized in the present day because of the change in the text books and the attitude of the profession toward the real significance of many of those

distressing disturbances in the human body referable to the stomach, back and abdomen.

The alert and careful diagnostition and surgeon should not too readily exclude these conditions when dealing with a case presenting uncertain symptoms of disease near or adjacent to the liver. Many of the old cases of gastric disturbance, soreness and pain in the region of the stomach, the colon and the liver, are, in reality, gall bladder disease.

In many of my own cases which were treated for months and even years, after a diagnosis of the old and well worn term—indigestion—had been made, eventually, there was found gall bladder or duct disease when by chance an exploratory operation was performed. The expressions — indigestion, nervous dyspepsia, gastralagia and stomach trouble are just as vague and uncertain as to the actual pathology present as are the old terms—female trouble and the other kindred diseases.

How many of our surgeons are exploring the region of the gall bladder as a routine for the purpose of discovery when patients are brought to the operation primarily for appendicitis or other supposed pathological conditions of the lower abdomen? A very large number of cases operated on by my associates and myself for primary lower abdominal or pelvic lesions, have revealed gall stones or infection of the bladder or ducts as co-existing; or, when operated on again at a subsequent date for distressing disturbances, proved the existence of gall stones or infection of long standing and which certainly antedated the former operation.

The importance of exploring the region of the gall bladder and of its actual examination together with the bile ducts, can not be overestimated when operating in nearby surgical fields.

Experienced members of the profession tell us that a diseased appendix, diseased tubes, ovaries and other common disturbances, may be, in time, the contributing or actual cause of gall bladder disease. Just now they produce the trouble may not be thoroughly understood, but actual experience and observation at the operation certainly have proved that gall stones and kindred affections very commonly exist along with chronic surgical lesions of the lower abdomen.

There certainly is no unanimity of opinion among operators of today as to how we are to deal with these conditions. It is probably safe to assert that the number of operators removing the infected gall bladder is rapidly increasing, and operators who have heretofore occasionally removed the gall bladder are now removing it in a large percent of their cases. There are those who cry out vigorously against the removal of the gall bladder in any case, and, on the other hand, there are those who remove the bladder in nearly every case where stones or severe infection are present. I am removing more gall bladders now in proportion to the number of cases handled than formerly, but, I certainly would oppose the removal of the bladder in every case as surely as I would oppose the removal of the infected eye in every case of infection of that organ were I a surgeon of that kind.

I have removed gall bladders which were the cause of regret, but I am sure that I have had more regrets from bladders left in the body. That the bile bladder has a function, we can most safely assert, but what that function is and what its importance is in the human body we can not affirm. There can be no argument, it would seem, against the removal of a gall bladder which has been so long and so completely diseased that

its function is lost, its duct obliterted and its presence continued in the body a dangerous irritant.

Finney and others as early as 1908 pointed out the importance of removing the highly hypertrophied or contracted gall bladder, when stones have been long present, stating that in every case of cancer of the gall bladder coming under their observation, there had been stones present or removed previously. It seems, however, on the other hand, when stones are of recent formation, or, in cases of infected bile, to drain the bladder by one of the usual methods. In such cases the gall bladder may be restored after infection has cleared up, and while, in some cases, it may never functionate again, its presence in the body does not endanger the life of the individula, but affords the surgeon a good land mark in performing an operation subsequently on the bile ducts or the adjacent organs should that necessity arise.

The promiscuous removal of the gall bladder in cases of infection, with or without stones, regardless of the pathology, is a dangerous and an unwarranted procedure. The baneful effects of removing the gall bladder are more impressively brought out in a recent paper by Eisendrath of Chicago, read at the last meeting of the American Medical Association, on Anomalies of the Bile Ducts and Gall Bladders in the Human Body. The paper is the result of an exhaustive study at the autopsy table showing the irregularities of the bile ducts, especially of the cystic duct, and the evil results of the careless removal of the gall bladder.

In performing either Cholecystotomy or Cholecystectomy it is sufficient to say that the bile ducts should always be observed and carefully traced to avoid the possibilities so forcibly illuminated in the paper mentioned. Operators of consequence have usually worked out their special technic in performing these operations and so long as each individual operator produces satisfactory results and the operation is performed with the view to the production of minimum damage to numerous blood vessels and vital parts in addition to the principal of object of relief to the patient, his method of operating may be regarded practically as good as any other.

The purpose of the paper is to emphasize the common occurrence of gall bladder and bile duct disease, the dangers of these very frequent pathological conditions being overlooked and their symptoms catalogued and recorded as those of the many meaningless and obsolete expressions—stomach trouble, dyspepsia, gastralgia and the like. Emphasis, also, is laid on the importance of exploring the region of the gall bladder and ducts with the actual examination of each, whenever it is reasonably safe, as almost the first procedure after opening the abdomen even in cases where a reasonably certain diagnosis of inter-abdominal trouble has been made. This exploration should be made before there is a possible contamination of gloved hand by its contact with infectious materials that might be present from diseased organs of the lower abdomen.

Above all, common sense and moderation should be observed in our decision as to Cholecystectomy or Cholecystotomy.

Ogden Place, 201 W. Main St.
September 27, 1918.

DISCUSSION

Dr. J. F. Fox, Bluefield: To my mind the question of Cholecystostomy and Cholecystectomy, is still an unsettled one. I mean of course, borderline cases.

I have removed the gall bladder, when later I wished I had not, and I have drained the gall bladder when I wished I had taken it out.

Cholecystostomy is a safe procedure, but does not always cure; there is something else then to do. Cholecystectomy is in many cases, but not all, equally safe but does not always cure, and if it does not cure, then we think sometimes there is nothing else to do.

I have been impressed recently by the suggestion of one of our best thinkers and teachers, the illustrious Ochsner Will read extracts from Surgical Clinic. "Having good drainage makes the removal of the gall bladder a useless step. Now if we could be sure that Cholecystectomy would be harmless, then it might be perfectly proper from a surgical standpoint and from a pathological standpoint to do useless things in surgery so long as one can be sure that useless things are harmless. That the removal of the gall bladder is not always a harmless step, we have found illustrated in dozens and dozens of cases that come to us for treatment, and are very much worse after the removal of the gall bladder than they were before. So we have felt that the removal of the gall bladder was the cause of their bad condition after operation.

Within the next four or five years everybody will be getting these cases, and then the cry will go up against removal of the gall bladder.

We tampon the gall bladder lightly with gauze, and then we suture it to the peritoneum and transversalis facia. We permit the gauze to remain from five to seven days."

INTESTINAL TUMORS.

ROBERT J. REED, M.D., F.A.C.S., Wheeling, W. Va.

Read at Annual Meeting W. Va. Med. Assn., Martinsburg, October, 1918.

In reckoning with obstinate abdominal symptoms in which only obscure, indefinite digestive disturbances are present, the mind naturally turns to the appendiceal, gall bladder, or pyloric region as the probable location of the cause. These are the most frequent centers of low inflammatory processes. Here adhesions and contractions result which ultimately produce interference to the normal food current. The measure of obstruction which follows is responsible for a certain train of familiar symptoms. Any condition, however, which narrows the lumen of the bowel will produce like symptoms. This fact must be kept in mind in our diagnostic efforts to determine the precise nature of this type of intra-abdominal pathology; and prominent among the causes of progressive bowel stenosis is the intestinal tumor.

The same general classification is made with bowel tumors as is made with new growths elsewhere in the body; namely, malignant and benign.

Of the malignant tumor both carcinoma and sarcoma occur. The former is found much more frequently than the latter, about twenty to one.

Virtually half of all intestinal carcinoma effect the rectum. In a recent collection of a great number of cases, 6.3 per cent involved the small intestine; 11.9 per cent the ileo-cæcal region; 11.9 per cent; the sigmoid; other parts of the colon, 20.4 per cent; the rectum 49.2 per cent. The latter therefore, is the most frequent site of cancer of the bowel the ileo-cæcal region and sigmoid fixtures

stand next. These are the points of stasis and the findings further confirm the theory of mild trauma and continued irritation as the potent factor in carcinoma.

Among other etiological influences is that of age. Carcinoma of the intestine is a disease of advanced life, as is true of cancer of the stomach and other parts of the body, but in exceptional cases young adults and even children will develop intestinal cancer.

Sex has an influence, males being effected three times oftener than females.

The carcinomatous growth is usually single and shows a tendency to early ulceration with bleeding, and an inclination to perforation into the peritoneal cavity or into neighboring viscera.

Another tendency is to encircle the intestine in its growth and extension, and by the contraction of the fibrous stroma of the tumor to cause progressive stenosis.

Secondary manifestations of the disease are found in the mesentery and peritoneum, and when these structures are involved, ascites is an early symptom. The further spread of the disease is by the way of the lymphatics and blood channels producing secondary tumors in the liver and other organs.

Sarcoma occurs in the large and small bowel with about equal frequency. Like carcinoma, when the lower bowel is the site of the disease, the rectum is the most frequent location. Sarcoma of the intestine may occur at any age, but most frequently in the forties. With respect to the element of sex, men suffer more than women.

Various forms have been observed, small round, and large round celled; spindle celled; lymphosarcoma; cystosarcoma, and still other forms.

There are certain distinguishing symptoms between sarcoma and carcinoma of the bowel. Sarcoma is likely to form a larger tumor than carcinoma. Sarcoma is less likely to form stenosis than carcinoma. The intestine may even be dilated with sarcoma. The sarcoma tends to invade surrounding structures by continuity. Carcinoma will be confined to the intestine for a longer time. Sarcoma usually involves a larger area of the intestinal wall than carcinoma. Metastases occur earlier in sarcoma than in carcinoma and through the lymphatics and blood vessels the mesenteric glands become involved forming large tumors. Also metastatic tumors of kidneys, liver and stomach appear early in sarcoma.

Sarcoma develops more rapidly than carcinoma, causing death usually within one year, particularly if the small bowel is involved. With a large tumor in the center of the abdomen increasing rapidly in size and not inclined to produce obstruction, sarcoma should be suspected. The prognosis even in early operations is less favorable than in carcinoma.

Benign tumors of the intestine are less frequent than malignant tumors and may not cause symptoms or give any indications of their presence. When they do, they manifest themselves in one of three ways: first, by giving rise to an intussuception of the intestine; second, by taking on malignant degeneration; third, after reaching considerable size they may produce obstructive symptoms by narrowing the lumen of the intestine, by mechanical pressure, or by effecting an angulation of the bowel.

Many varieties have been observed: adenoma, lipoma, fibroma, myoma, nixoma, and rarest of all are the cystic and the dermoid variety of tumors. Surgical authorities, from their silence, would seem to agree with Mr. John Bland-Sutton of London, who makes this statement in an exhaustive article on tumors, in *Keen's Surgery*: "For many years I

Keen's Surgery: "For many years I held to the opinion that dermoids had never been found growing primarily from any abdominal viscus save the ovary, but recently a surgical associate sent me a specimen for examination which proved to be a dermoid cyst, found in the angle formed by the junction of the peritoneum. The specimen had been removed from a man after death. It is difficult, on any of the theories adduced to explain the origin of tumors, to account for this dermoid."

It may be of interest to inspect an exact counterpart of the specimen just described and a cut of which may be seen in *Keen's Surgery.*

W.E.M., thirty-five years of age, railroad brakeman, came under my care in May, 1913, with symptoms referred to right abdomen. The pre-operative diagnosis was partial intestinal obstruction from adhesions involving the caecum. An operation disclosed the fact that the obstructive symptoms were caused by a tumor so situated that under certain conditions and posture of body, it closed the ileo-caecal valve. It required a resection of the entire caecum and three inches of the ileum to remove it. On examination it proved to be a tumor of the dermoid variety and in location and size, as well as type, so like the Bland-Sutton specimen that I have deemed the coincidence so striking that it was preserved, and is presented for your inspection. After a somewhat careful examination of the literature I believe I may claim for this specimen that it is the only intestinal dermoid in captivity, whose former owner is living and well.

The early symptoms of intestinal tumor may be so slight as to not attract attention; simply moderate digestive disturbances with constipation or diarrhea, or alternations of the two. Benign tumors may give rise to no well defined symptoms for a long period because of conditions just mentioned. Malignant growths will in some instances manifest their presence in discharges from the rectum of small amounts of blood or blood stained muco-pus, or even fragments of tumor tissue. Peculiarly fetid character of the stools is noted very usually in the malignant type of tumor.

It is only when a tumor of the intestine reaches that stage in its development when partial intestinal obstruction is occasioned that progress in diagnosis may be made, unless, perchance, the growth is large or the abdominal wall exceptionally thin and the mass be discovered possibly as a result of accident. Small tumors under thick or moderately heavy abdominal walls, not as yet producing symptoms of stenosis, are rarely discovered.

As a rule therefore, the question to be considered in the diagnosis of the intestinal tumor are the same questions that are involved in chronic or incomplete intestinal obstruction from any cause. It should be remembered that very material difference exists between the symptoms of chronic or incomplete intestinal obstruction and those of complete or acute obstruction and that the anatomical site, as well as the degree of stenosis, will decidedly modify the signs and symptoms of obstruction of this type. The higher the seat of stenosis in the small intestine the more prominent are the gastric disturbances; the lower the stenosis the less pronounced they will be, but the gastric signs are always present in some measure, becoming significant, even though the obstruction be remote; if for a time, it should approach a condition of complete stenosis. In that event nausea and vomiting will become a marked symptom. In chronic obstructions of the small intestine, in addition to the reflex gastric symptoms, there will usually ap-

pear the signs of: (1) localized pain, (2) localized tympanitus, (3) localized peristaltic waves, palpable and visible and always to be found in the same portion of the abdomen. As this wave reaches its maximum of intensity it will be noted that the pain reaches its greatest severity. Associated with this sign of exaggerated peristalsis there is usually present the intermittent rigid contraction of the muscular coat of the bowel, which may be recognized by palpation. Necessarily, the prominence of these physical symptoms will be influenced by the degree and location of the stricture, as well as by the hypertrophy of the bowel above the stenosis, and the heaviness of the abdominal wall. They will be modified also by the kind and quantity of food injested as well as by the posture of the body, since certain positions of the body encourage by mechanical pressure and angulation to the intestine. These phenomena are definite, centering about a particular point, and re-appearing at this same point in recurring attacks.

When a tumor is in the large intestine and producing stenosis symptoms, they are not so pronounced as when the small bowel is involved unless the growth is located in the caecum or near the ileocaecal valve. Here the signs resemble those of obstruction in the small bowel and the whole of the ileum may manifest the symptom of exaggerated peristalsis with hardening of the bowel and with colicy pains referable to the central abdomen.

When a tumor with partial stenosis is situated further along the colon, a more latent course will be run, the peristalsis and other symptoms are less pronounced and the condition therefore may remain long unrecognized. The large bowel, unlike the small, is very tolerant of residual material within it and is not stimulated by its presence to active peristalsis as is the small intestine. The contents of the colon may accumulate above the obstruction and give signs of fecal impaction only, with little evidence of obstructive symptoms. Many of the early indications of colon stenosis are direct or indirect results of these impaction experiences. The colon fails to be relieved directly for the reason of a fecal stasis above the stenosis and the history of obstinate constipation is the result followed not infrequently by diarrhea. It would seem rational to explain the appearance of diarrhea, as we do the weeping eye in the presence of the cinder. By a wise provision of nature the offending body in the eye produces an irritation and its product, the tears, floods the eye and carries away the cinder. Likewise after a time the fecal mass retained in the colon above the stricture creates mechanical irritation, an acute catarrh, with a bountiful secretion which liquifies and lubricates, and as a result the impaction is carried away in a flood of diarrhea. If now with an outbreak of diarrhea, which has been preceded by marked constipation, there is noted an odor which is extremely fetid indicating putrefaction from age, and also quantities of mucous tinged with blood or muco-pus, one's suspicions may well be aroused of colon stenosis with the possibility of a new growth as the underlying cause of this train of symptoms.

With a history of constipation and alternating diarrhea, it is profitable to study conditions prior to the diarrhea disturbance. Other hints of intestinal obstruction may be found, namely, localized tympany, colicky pains with gastric symptoms of mild nausea with tendency to vomiting.

The latter evidences of malignant intestinal tumor are ascites, and a progressive cachexia. Complications which may arise depend upon the other organs and

structures which may become involved as well as the location of the tumor. In a recent experience with a cancer of the colon at its hepatic flexure, a complication of peritonitis arose suddenly. The indication pointed to its being of the perforating type. An operation was performed at once and an enlarged dilated perforated appendix was disclosed, as the cause. The strictured colon had brought about a dilated caecum and appendix and in a moment of powerful peristaltic contraction to empty itself through the stricture, the back pressure upon the weakened appendix was too great for its wall to withstand, and its rupture was the result.

With respect to the question of differential diagnosis, on account of limited time it will be possible only to name the conditions and diseases which may be mistaken for intestinal tumor; simple fecal impaction, ileo-caecal tuberculosis, tumors of the mesentery and of the greater curvature of the stomach, of the gall bladder, of the kidney and movable kidney, tumors of the pancreas, chronic inflammatory exudates and enlarged lymphatic glands.

In these conditions of "chronic abdomen" after signs and symptoms have been well digested we have in these latter years the greatest possible diagnostic aid in reaching final and definite conclusion, the x-ray findings. In the future great embarrassment awaits the physician who delays this important means of diagnosis, permitting an operable and curable condition to drift into an inoperable and fatal one before a diagnosis has been made.

There is but one treatment for intestinal tumors and that consists in resection of the segment of the intestine involved. Early diagnosis and the radical operation will save a large percentage of even malignant tumors of the intestine. Percentages of cures as high as thirty have been reported in a number of series. If the disease is too far advanced for the radical operation of resection, life will be prolonged by palliative procedures. An astomosis between the healthy bowel above and below the growth should always be done. By encircling the intestine with linen or silk suture above the tumor and thereby closing the intestine insuring perfect freedom from all irritation in the new growth, not only is the patient's pain relieved and the physical condition improved by restoring the ability to take food, but the progress of the disease is retarded by the escape from this irritation. If the tumor is located very low in the colon and is already inoperable, a colostomy should be performed.

In resection of a tumor of the sigmoid at its distal end difficulties are encountered which are not met with at any other point along the intestinal tract. Its inaccessibility is decidedly great. By the abdominal route the difficulty in the technique of resection is found in effecting an anastomosis with little or nothing left of the sigmoid above the floor of the pelvic fossa.

By the sacral route following along the lines of a Kraske operation for rectal cancer, the difficulties encountered are found in the delivery of a sufficient amount of the sigmoid to permit a wide resection of the growth and have remaining a sufficient amount of bowel to effect a secure anastomosis with the rectum.

Within the year past the writer has had a successful operation by adopting the following technique. A preliminary colostomy was performed as the first step. At this time the precise location of the tumor was ascertained with respect to its relation to the floor of the pelvis and the question of operability further

determined by disclosing the absence of complications in the way of adhesions to the bladder or glandular and lymphatic involvement. In the colostomy the end of the descending colon was utilized, leaving the entire sigmoid free for the later resection. Some four weeks were given the patient after the colostomy to regain his physical tone, which had become extremely lowered by chronic intestinal obstruction. By permitting rest to the sigmoid and giving it a daily lavage the irritability and congestion in the vicinity of the tumor was very much reduced.

Resection: (1) Removal of coccyx and two inches of the sacrum, (2) ligation of the hemorrhoidal veins and freeing of the rectum extensively from its attachments in the upper two-thirds of its length. This is important as it is necessary to lift the rectum and make it go more than half way to meet the sigmoid after the tumor has been removed, (3) opening of the pelvic floor, delivering the tumor, placing strip of gauze above it for the purpose of gentle and steady traction, and the ligation as high as possible of the mesosigmoid vessels, (4) the excision of tumor and an end-to-end anastomosis. The first line of sutures, of linen, was placed anterially for half the width of the bowel before the intestinal clamps were placed and the growth excised. The remaining steps did not differ from the usual end-to-end anastomosis procedure, (5) repairing the rent in the pelvic floor by stitching its edge with interrupted sutures to the sigmoid, (6) placing iodoform gauze drainage about the site of the union, passing a rubber drainage tube through the rectum to a point past the anastomosis, and closure of skin incision, leaving exit for the drainage, completed the operative technique.

The sacral route for this operation I believe to be easier than the abdominal and certainly safer with respect to post-operative peritoneal sepsis.

Where dissection of the pelvic glands and lymphatics is required, or other pelvic complications have to be considered, the combined technique should be adopted. In this event, with an abdominal section above, an extra hazard will be encountered because of the close proximity to the colostomy, and unusual care required to protect against infection.

PELLAGRA; WITH REPORT OF THREE CASES.

By H. G. STEELE, M.D., Bluefield, W. Va.

Read at Annual Meeting, W. Va. Med. Assn., Fairmont, October, 1917.

Pellagra is pronounced in the United States in three ways. It is an Italian word, originated among the common people of Italy, and was first used in medical literature by Frapolli in 1771, in the phrase, "morbus vulgo pellagra," meaning "a disease among the people called pellagra." The name is therefore of peasant origin, and is a union of two Italian words,—pelle, meaning skin; and argo, meaning rough, or rough skin. Anyway, we may know more about the derivation of the word than we do of the etiology and treatment of the disease; and I want to say, here, that I know little or nothing about either of the above.

My object in reading this paper before you today is to picture to you who have never seen a case of pellagra, the three cases I have had under observation; and at the same time to get from you who have treated pellagra all you are willing to make public concerning your observation in the early diagnosis of this much-dreaded disease, your treatment in the same, and what success you have had, if any.

It is a disease of many symptoms and many variations; its only consistency is its inconsistency; it seems cured, and yet recurs; the pellagrin seems to be approaching his end, yet lives for many years; it spreads and is not contagious, or communicable, as has been proven by Dr. Joseph Goldberger, of Washington, D. C., in his long experiments from April 25, to November 16, 1916. He says, "They materinally strengthen the conclusion that it is a disease essentially of dietary origin, brought about by a faulty probably deficient diet."

The offspring of the pellagrin receives his mark, and yet it is not inheritable; it is not, and it appears; it is, and it disappears; it is a morbid entity, yet contains within itself many lesser morbid entities; it falls with equal rights in the sphere of dermatology, neurology, and gastrology, yet it is a general disease.

Some of this paper is compiled from Stewart R. Roberts' and Forchheimer's books, from magazines and medical journals. Roberts defines pellagra as an endemic and epidemic disease, periodic and progressive in its course, and characterized by series of symptoms involving chiefly the digestive, cutaneous, and nervous systems.

General description: Pellagra may be endemic in country communities for a century, as in Italy, or suddenly epidemic, as in America. It varies in length from a six weeks' course of typhoid pellagra to twenty or thirty years, or even longer, of the chronic form. It finds its chief home in the country districts, and attacks all classes, all ages, and both sexes; but does not attack dwellers in crowded cities. The attacks begin usually in the spring and summer months, recurring with increasing severity every spring. A second attack may occur in the late summer or autumn months, with remission of symptoms and improvement during the winter. Its onset is insidious, its attack is periodic, and its course is progressive.

CASE 1.

My attention was first called to this disease in August, 1909. On the tenth of the month a big healthy-looking colored wash woman, 38 years old, and weighing 215 pounds, came to my office, complaining of her forearms hurting her after she put them in the water, developing in the evenings to rather an aching sensation, which condition had existed from ten days to two weeks. Thinking she was suffering from some nervous affection, I prescribed acetanilid and soda compound; but a few days later she returned, saying the medicine had not relieved her pain in the least. Now feeling that this might be of a rheumatic nature, she was put on aspirin and sodium salicylate, with the result as before. When she returned the second time, a bilateral symmetrical erythema was making its appearance on the exterior surface of her forearms. Believing this was sun burn, she washing in the sun most every day, the following applications were made from time to time: Unguentum zinci oxidi, picric acid solution, ichthyol and vaseline, and dusting powders; but it progressed to desquamation and pigmentation, extending from 5 cm. on the right and 3 cm. on the left, below bend of elbows down to the middle of the second row of phalanges on the right hand, and to the last row of phalanges on the left, covering also the flexor aspect of each wrist. Now, the digestive symptoms began to manifest themselves in the form of stomatitis, esophagreal burning, pyrosis, gastralgia, belching, nausea, gastritis, enteritis, dyspepsia, and a severe diarrhea. Along with this stomatitis a discrete diphtheritic membrane was seen in

the floor of the mouth, on the tongue, the buccale regions, the pillars of the fauces, each side of the uvula, and on both tonsils. That on the tongue when removed with difficulty, left a bleeding surface behind. About a week later a similar white membrane developed on the labia majorae, and minorae with a very much inflamed area surrounding. In this region it was more confluent, on the right labia majora there was a patch of membrane 3 cm. in diameter, on the upper third of the left labia minora another patch 1¾ cm. in diameter. This inflamed area kept the region moist and very sore. Also about the rectum there was a raw surface 8 to 9 cm. in diameter, this improving slightly under treatment.

When the tender area in the vaginal and rectual regions had attained its maximum intensity the membrane in the oral region disappeared as the rash in measles disappears in the face and on the chest as it appears on the arms and lower limbs.

At this stage of the disease the affected areas on the arms had desquamated, and the reddened surface was being covered with a new cuticle layer. The patient was now much emaciated, anemic, and only weighed from 130 to 140 pounds. The diarrhea was ungovernable throughout the attack and her bowel movements varied from eight to twelve a day. The gastric symptoms, nausea and vomiting began before the reddening of the mucous membrane of the oral region, and continued to the end.

The urine looked right yellow, as she said, but it was not examined. She complained somewhat of pains on the anterior aspect of her lower limbs from her knees down. She was troubled with pains in the lower half of her abdomen from the time she went to bed until she died.

The treatment carried out in this case was as follows: Mouth washes made of Alkali antiseptic tablets, Bor-Carol, Peroxide of hydrogen, Permanganate of Potash, Boric acid, Euthymol and Chlorate of Potash, and the drugs administered internally were: Acetanilid and Sodium Comp., Aspirin, Sodium Salicylate, tonic tablets, Chloral Hydrate, Potassium Iodide, Liquor Potassi Arsenitis, Arsenate of Copper (gr. 1-50) and Quinine Sulphate. Diet was composed of liquids and semi-solids as raw and soft boiled eggs, toasted light bread, soups, milk, etc.

She said that she was accustomed to eating corn bread for her supper most every day. Some time before she was taken sick she remembers eating two meals of corn bread from a sack of stale meal, then fed the remainder to the chickens. For many months previous she was accustomed to drinking from one-half to a pint of liquor a day, and she preferred corn whiskey. Now, did this corn whiskey have anything to do with the development of pellagra in this patient?

CASE NO. 2

Mr. D. G., Keystone, W. Va., seen in November, 1911; occupation gambler, did odd jobs at times, single, white. Birthplace, Virginia. Age 36, height 5 feet 10 inches, weight 175 pounds.

Past history: About September 20, 1911, the dorsum of his hands showed signs of erythema, developing without any pain, but grew gradually worse. On or about October 20 of that year he painted a large iron building (a blacksmith shop) with a strong tar paint. The hot sun and the strong paint aggravated this condition very much until it appeared as though he were suffering from sunburn, and when he called a neighboring physician's attention to it, a white ointment was prescribed to be applied.

On November 15, when I was called in to see the case, the scaly erythema had already developed, the discrete diptheric membrane was present on the tongue, on the dorsum a few, but many underneath, and some were seen on the buccal regions, with the whole mouth and pharynx apparently in a flame of fire. He was troubled considerably with diarrhea, his bowels moving every two hours or more, and his rectum prolapsed for an inch, with same condition of mucous membrane existing here as in the mouth. He could not open his mouth very wide, deglutition was rather painful, and what he swallowed was vomited almost immediately. Occasionally he relished milk and raw eggs.

There is a peculiar odor to the breath and scales of these patients which, to me, is very characteristic as a diagnostic sign of the disease, both these being manifested very distinctly in this case. The temperature and pulse remained practically normal throughout.

At this stage of the disease, the scales were dropping off the backs of the hands and fingers, also about the wrists. His bowels continued to move until I prescribed big doses of bismuth along with Dover's powders and salol. Frequently it became necessary to prescribe morphia gr. ½ per ora to relieve his abdominal pains and sore mouth. I credited the large doses of morphia with lessening the bowel movements and thought it might have had something to do with aggravating the gastric symptoms.

On November 22, the patient's conditions was as follows: He was growing weaker and was drowsy most of the time. The mental symptoms manifested themselves by the patient being forgetful, and not noticing visitors long at a time He became constipated, and was given 2½ grains of calomel, followed by a large dose of caster oil.

On November 23 he was growing hard of hearing, and his mental condition not at all good. He realized that his memory was growing worse. Appetite had not been good for some time, and was now nauseated often.

Treatment: In addition to what has been mentioned he was given the following: Potassium Chorate solution, Alkali antiseptic tablets dissolved in water, Peroxide and water, Listerine and water as mouth washes. Fowler's solution in gradually increasing doses was administered internally, and Ungunti Hydragyria Ammoniati, and Unguenti Zinci Oxidi were applied locally on the hands. Diet was principally of a liquid nature. He had eaten corn bread occasionally; had been a hard drinker of spirituous liquors for many years, and one of his favorites was corn whiskey. He died November 27, 1911.

CASE No. 3

Mrs. C. F., Bluefield, W. Va. Seen 10:30 a. m., September 19, 1917. Occupation, housework, married first time 22 years, single two years, married last time nineteen years; color, white; birthplace, Mercer County, West Virginia. Age 55, height five feet seven inches, weight 155 pounds. Gravida 8.

Complaints: A hurting above her left hip in the region of the spleen, head feels a little dizzy all the time, also sore mouth —a little pyorrhea, mind not clear, but a little better on this day than for three months back, says her mind is as bad again in the evening as in the morning.

Family history: Father died from dropsy, age not known. Mother died February, 1915, age 76, cause of death, a fall a year previous. One sister died at 62 from dropsy; four sisters are living, three of them suffering now from dropsy, the other one well, ages not known.

Two brothers dead, one to use her expression, "weakened down and died" at the age of 22, the other one was killed in the mines at the age of 19. Two brothers are living, one aged 34, health good; the other 32, has dropsy.

Personal history: Does not know when she began to walk or talk. Had the following diseases of childhood: Measles, mumps, whooping cough, chicken pox and scarlet fever; had rheumatism at 27 for six months; had pleurisy in 1905 and was in bed ten weeks.

Head: Had headache for eight or ten years up until 1910, but since that time has not been bothered much with it. Has had a great deal of trouble with her eyes for the past two years, they are sore, she has a slight purulent conjunctivitis and everything looked dim before her eyes. Quite a little puffiness about her eyes for the past two years. Hearing not very good for the past two weeks in her left ear, possibly caused from an abscess in the frontal region which discharged a sanguino—purulent fluid September 16, and has improved without treatment. In the year 1909 had seven small abscesses in the external ear, and these were lanced by Dr. W. H. St. Clair each time. Her hearing is not very acute now. Had tonsilitis September 3, 4 and 5, this year. Had pertonsilar abscess year 1898.

Cardio-Respiratory: Has had a very hoarse cough (very mild) for over a year. The upper respiratory secretion seems to be very sluggish. Some edema about the feet and ankles for past two years. Complains of pains at times in the region of her heart, which radiates to her back, this having troubled her for over twelve months. Eight years ago she had a severe spell with her heart, it being necessary, she said, for her daughter to stand with a hot iron held to her back while her husband held one to her chest, until the doctor came and gave her relief. She remained quiet in bed for four days.

Gastro-intestinal: Appetite not very good for the past seven or eight months, digestion has always been very good. Habits of eating very regular. In the morning she takes a little coffee, about 10 o'clock a. m., occasionally takes a raw egg in buttermilk; then at noon she eats a light meal, about 7 o'clock she usually eats a hearty supper. An hour after the noonday meal she notices a distention of gas, and an uncomfortable feeling in the neighborhood of the cardiac end of the stomach. Year of 1909 she claims she vomited some blood, a small quantity. Most all the time her bowels are constipated and she is compelled to take a laxative or purgative every few days. Had jaundice year of 1878, duration one week. Been troubled with hemorrhoids for a year or more. August 19 she passed an ounce of blood, and also on September 12 she passed about one-half ounce.

Genito-urinary: February, 1916, she suffered two weeks with cystitis.

Operations: February 1, 1909, she was operated on for abscess in right inquinal region, then on the 20th she was operated on in the left side for an abscess. I could not ascertain if these extended to the abdominal cavity or not. She was in bed seven weeks from these two operations.

Nervous and Mental: Claims she has nervous spells every day, gets weak and faints often. While gathering tomatoes a few days ago, she became blind and fainted. Suffers considerably from disagreeable dreams. She does not know what it is to enjoy a good night's sleep. Had several spells in the past three years of neuralgia up the back of her neck. In August, 1916, she was in bed suffering from an attalk of sciatica.

Leukorrhea: Has a little purulent discharge from the vagina at this time.

Habits: Never drinks any tea, but drinks a cup of coffee once a day. Has used a little snuff most every day for the past seven years. Drank a little beer all her life until West Virginia went dry. Drank a little whiskey most every day, egg-nog every few days. Never drank much corn whiskey.

Marital history: Married first time for 22 years, had six children and two miscarriages. Two children dead—one born dead, the other one died of membraneous croup; the other four are all well, ages, 38, 36, 34, 32, one male and three females. Married last time 19 years, two miscarriages—one 1909 cause injury, and one 1910, cause—reaching over fence to get bucket of water.

Present illness: On March 3, 1915, I was sent in to see this patient, and on account of one of my neighbor physicians not being able to make a satisfactory diagnosis, I undertook to search for the seat of her trouble, or to bring forth enough light for the darkened signs and symptoms to make a diagnosis sufficient to put her on some sort of a treatment. A long history was taken, and she was watched closely until the 26th of June, without any definite conclusion as to a positive diagnosis, but treated the symptoms as they arose. Two of the conspicuous features of her trouble were the dry scaly skin all over her body, and her mental faculties being dulled to a certain extent. In looking over my books, I see where I made almost daily visits from September 8 to 25, 1915; August 12 to 18, September 15 to 17, October 17 to November 20, 1916; and this year I have been there every few days since July 27. Last October the back of her right hand was treated for infection caused by a scratch from a thorn, and here is where I discovered that she might have been suffering all these years from pellagra, but the evidence was not sufficiently manifested to me to clinch a diagnosis, although the scaly eruption was still present all over her body, and the back of her hand was slightly reddened.

When called in to see her this year, I immediately made a diagnosis of pellagra, as the erythematous eruption was well marked on the backs of both hands and forearms. These were treated with a 10% ichthyol ointment to relieve the itching and burning sensation, and on August 6 I started her on the Sodium Cacodylate (5 gr.) treatment. At this time the eruption on the arms and hands had reached its worst stage, but began to show signs of improvement after the third dose of Cacodylate of Soda, August 22. About September 1 a scaly eruption appeared on the face just below the eyes, near the nose, but it disappeared in a few days.

The above mentioned treatment has been kept up every three to seven days, and the last two doses have been increased to seven grains. She has been cut out of most all carbo-hydrates and put on more or less of a proteid diet. At this time (September 25) her hands and arms have almost returned to their normal condition. Bowels are still constipated, but rest of the gastro-intestinal system is in excellent condition.

PELLAGRA

By DR. E. F. MOORE, Davis, W. Va.

Presented to the Barbour-Randolph-Tucker Medical Society.

Mr. President and Gentlemen: —

I have the privilege of offering you a clinic this evening which I am sure will be of interest to all, for at least two

reasons: First—Because of the rarity of the malady in this section, and, second, because so little is really known as to its etiology, that it presents practically a virgin field for original research and investigation, and much fame is in store for the investigator who can place his branding iron on this etiological maverick and demonstrate its pedigree.

Previous to 1907 Maidism or Pellagra, was of scientific interest only, to the American physician. Since that date, however, it has become fairly well known in many parts of our country, cases having been reported from thirty states; mostly south and west. To such an extent has it prevailed in Oklahoma, for instance, that the State Medical Society has a section devoted to its study. In the summer and fall of 1912 it assumed almost the proportions of an epidemic in Kansas.

Females are more liable to the disease than males, the ratio being 6 to 4. Also colored people are more affected than whites, the ratio being slightly higher than 6 to 4. Children under the age of 15 years are rarely affected, and in the rare cases noted under this age, the disease has invariably been very mild and the disposition to become chronic not so marked. Each succeeding decade above fifteen shows increasing number of victims, until at the age of sixty the maximum is reached both as to number and fatality. The clinical picture presented by a series of cases, is fairly regular and consists of gastro-intestinal irritation, certain skin lesions, and a more or less marked affection of the cerebro-spinal system. Cases usually develop in the spring of the year and the early symptoms are lassitude, disinclination to exertion (which must be differentiated from spring fever) debility, vertigo, insomnia, headache, indigestion with diarrhea. Later there is a sensation of superficial heat throughout the body, including the oral mucosa, which appears red and swollen. There is copious salivation, and in some cases the mucous membrane became ulcerated or "stripped," and a thin exudate is noted, resembling diphtheria. All mucous membranes, fancial, rectal and vaginal become intensely red. The diarrhea is sometimes hemorrhagic, more often, however, thin and watery. Nausea and vomiting are the rule.

The skin lesion is characteristic and resembles an indolent erysipelas. After a certain chronicity is reached the skin does not close up during the recessions of the malady, but remains rough, harsh, dry and pigmented, especially on exposed surfaces, such as the hands and face. In the "wet" form of the disease the skin expoliates and bullae and vessicles are observed. There is a form of the malady called "pellagra sine pellagra" in which cutaneous symptoms do not appear.

Conversely all the symptoms may appear in rapid sequence, constituting the fulminating type.

Motor disturbances are noted in the form of muscular weakness, localized paralyses of muscles and groups of muscles, painful muscular spasms, areas of anaesthesia, increased tendon reflexes, and even epileptic form seizures. Psychic disturbances are noted in the form of mental habitude, delusions of persecution; stuperous melancholia, with a tendency to suicide. As the disease progresses all the symptoms increase in gravity, the muscular weakness becomes excessive, the diarrhea an uncontrollable, though painless flux; the mental disorder a delirious dementia; the heart action extremely weak and irregular, and the patient dies in a marasmus unless an intercurrent disease ends his sufferings earlier. Many cases recover, however,

the mortality averaging about 25%. The disease is usually a chronic one and may last ten to fifteen years before the final stage is reached. Cases recovering do so after the first, second, or at most, the third mild recurrence. After the third recurrence, even if mild, there is little upon which to found a hope.

As to its etiology, very little is really known. There have always been opponents to the theory that damaged or diseased corn was even the principal malefactor. Various explanations have been given accounting for the noxiousness of the corn, but all have lacked that finality necessary for final acceptance. Tombroso has isolated from damaged corn two toxic principles, one an alkaloid similar to strychnine and called pellagrazein, and the other a narcotic substance similar to nicotine.

At this time the students of pellagra are divided into two schools, known as the Zeists, or advocates of the corn idea, and Anti-Zeists, or those opposed to it. Then again, the Zeists are divided into two schools, one of which claims that the disease is developed in corn harvested before full maturity, and stored in damp bins, or cribs. The other school claims that the corn is innoculated while at growing by the *Simulium reptano,* or Buffalo gnat. I note in passing that the Kansas epidemic of 1912 was confined largely to the western part of the state where no corn is grown, and where the Buffalo fly is almost as notorious as the Jersey Mosquito.

As to *treatment,* no specific is known yet all observers agree on the following measures as being of value, to-wit: Arsenic, in some form, at present Fowler's solution being the favorite, with some observers reporting good results from Soamine and the intravenous injection of Cacodylate of Soda; a generous diet, of which fruits should form no part. Baths, both hot and cold; general improvement of the hygienic condition and where possible complete change of environment with rest in bed and careful nursing. Mental cases should be confined in sanitaria.

The history of the case here presented is as follows:

Family history negative except mother has rheumatism and kidney trouble.

Patient is 37, and has had the ordinary diseases of childhood. Fifteen years ago had typhoid. Since her last child was born two years ago, has not menstruated.

Present trouble began last March with an eruption on hands, arms and neck. At first the hands were rough and cracked, itching and burning. In a few days small vesicles appeared on arms and hands, spreading to the neck. Throat and mouth has been sore at intervals; appetite has been poor, and there has been recurring attacks of diarrhea. There has been progressive weakness and she has done no work for four months.

Physical examination at this time shows patient much emaciated; skin over entire body is harsh and dry, especially marked on hands and feet, where there is some scaling. The palms and soles show marked thickening. There is great mental depression and the mind acts with extreme slowness.

The tongue and buccal mucosa are extremely reddened and tender. Vaginal mucosa reddened but not tender. Heart and lungs negative.

Temperature has fluctuated between 97.0 and 99.4 degrees. Pulse from 80 to 100, usually somewhere in the nineties.

PUERPERAL GANGRENE OF BOTH LEGS, EXTENDING TO KNEES, DOUBLE AMPUTATION. RECOVERY

CHAS. F. HICKS, M.D., F.A.C.S., Supt. and Surgeon in Charge Welch Hospital No. 1, Welch, W. Va.

In the *Journal of Surgery, Gynecology and Obstetrics,* November, 1916, issue, Dr. Arthur Stein, of New York, gave a very instructive and able paper on the subject of Puerperal Gangrene of the Extremities.

He made a very careful study and investigation of the literature on the subject and is to be congratulated upon the work and time he spent in compiling his reports.

In his valuable paper he cited that, there were only seventy-six authentic cases reported in the literature at that time. This led him to report two cases which he had treated, bringing the number up to seventy-eight.

I desire to report a case we have treated, bringing the number to seventy-nine. I shall not take up the subject for discussion, but would advise the reader to refer to Dr. Stein's paper, where one will find he covers the subject in a masterful way.

THE WRITER'S CASE

Case No. 14127. Mrs. J. R., twenty years of age; admitted to Welch Hospital No. 1, March 3, 1916; referred by Dr. J. K. Heatherman, a former interne. History as follows:

He delivered patient on January 14, a normal labor; male child. The puerperal period had been normal, she had always enjoyed good health, and had borne two children previously.

Dr. Heatherman was summoned to attend the patient in confinement on January 14, found her well advanced in labor, and delivered her in the course of two hours.

Being a normal delivery, no tear, he left with the usual instructions of maternity care. The puerperal period was normal and patient got up on tenth day.

In about four weeks after her confinement she called him in relative to some pain she was having in her feet and especially ankles, and stated to him, she believed she had rheumatism. He found upon examination that her ankles were swollen, somewhat tender to touch, and a few vesicles. He prescribed palliative treatment, put her to bed and gave it little concern; at this time she had no temperature and pulse was normal. He saw her again in a few days, and found her condition growing worse. She was suffering with pain and a tingling sensation in her feet and legs, progressively growing worse. In about two weeks her toes were swollen, cold, and were taking on a dark purple color. She was complaining of much pain at ankle and radiating up her legs. He enveloped her feet in cotton and continued the palliative treatment. He secured a specimen and made an examination, but found it negative; he advised her to go to the hospital but she declined.

The gangrene which had started in the toes, began in the left foot first, the toes of other foot started in about three or four days later, gradually extended to ankles and up the legs. He made repeated examinations of the urine and was always negative.

After a careful search, and not being able to find any cause for the gangrene, he called in a consultant who advised with him that patient be sent to a hospital for treatment. Her temperature at this time was running along from 100 to 101, pulse gradually increasing.

When admitted to Welch Hospital March 3, the history of the case is as follows:

A fairly well developed woman, with temperature 101 F., pulse 110, soft and regular past history negative as to infectious diseases; had borne two children previously which were living and healthy, no miscarriage, no severe illness of any kind, family history of no importance—examination showed pupils normal in reaction, tongue coated, breath foul, teeth in good condition, tonsils small, no signs of infection; thyroid not palpable.

Heart free from murmurs and in normal position; lungs negative. Abdomen slightly distended, but soft. Pelvis examination negative, uterus in normal position, no lochia.

Urinalysis highly colored, acid reaction; specific gravity 1022; trace of albumen, but negative as to sugar.

Microscopical examination negative. Feet and legs—there was much swelling of both feet and legs, extending to her knees; extremely tender to touch, cold, and some places showed vesicles. The discoloration was very black, but shaded off to a dark purple near the knees; near the tubercle of the tibia, was a faint line of demarcation. Patient was complaining of pain in knees and also in calf of legs.

A diagnosis of typical symmetrical dry gangrene of both feet and legs could easily be made. Amputation above the knees was advised.

She was treated by Murphy's saline, with half ounce soda bicarb. to one pint, morphia to control pain, encouraged to drink large amount of water. On following day, March 4, her temperature was 101 and pulse 120. She was taken to operating room and left leg amputated above knee; she stood operation well, the treatment was resumed and on the 6th, two days later the other leg was amputated above the knee; the temperature immediately came down to normal, pulse gradually dropped to normal.

Patient made good recovery, wounds health without infection, stitches were removed on tenth day, and patient was discharged from hospital on fourteenth day.

At present going about on invalid chair doing her work.

In conclusion, will say a Wassermann test was not made.

The result of the histological examination was as follows: The specimen consists, leg, skin not broken, skin on foot, hard and dry—superficial fascia on dorsum and plantar region, necrotic; tendons show marked necrosis; deep muscles show extensive necrosis.

Thrombus of blood clot was observed in anterior and posterior tibial arteries, extending to bifurcation of popliteal.

There were thrombi in all veins. Examination of right leg was not made.

ANNOUNCEMENTS AND COMMUNICATIONS

HEADQUARTERS 81ST DIVISION
AMERICAN EXPEDITIONARY FORCES
FRANCE

December 25, 1918.

General Orders
No. 50

1. The Commanding General desires to express his appreciation of the conduct of the officers and men of the division during the 9th, 10th and 11th of November last, in the Sommedisue Sector at Verdun, during the advance of the First Army, of which it formed a part.

2. The orders were to advance on a front of some twelve kilometers from Eix to Fresmes, over the Woever plains.

The ground was marshy, covered with enemy wire and no adequate artillery preparation was possible. The advance

was made in the face of determined resistance by machine guns; and intense artillery fire, directed by airplanes, and to which no reply could be made. At 11 a. m. on November 11th, this division had advanced in places five and one-half kilometers and had captured four villages after strong resistance; had captured many machine guns and prisoners; had attained the enemy line of resistance and was steadily advancing.

3. The Commanding General emphasizes the excellence in discipline and training and the intelligent and creditable work of both officers and men in this, their first engagement as a division.

4. The casualties in these operations (over one thousand) were about one to eighteen of the entire strength present.

5. The following named officers and men were particularly commended for gallant and meritorious conduct:

First Lieutenant Atlee Mairs, Medical corps, who, maintaining his first aid station at and in front of the Battalion P. C. at Moulanville, worked unceasingly during the whole operation, caring skillfully and efficiently for, not only his own men, but the infantry as well.

Private Leo D. McLaughlin, Sanitary Detachment, attached to Company "F"; accompanied his unit into the front line when they were ordered in as infantry and aided the wounded of his own company and the neighboring infantry with the utmost devotion and bravery.

Private Bert Hallstein, Medical Department, attached. Gallant conduct while driving a motorcycle for an officer, waiting his return while under fire and exposed to gas, and driving the officer to a place of safety under heavy fire and gas over shell-torn roads.

CHARLES J. BAILEY,
Major Gen. U. S. Army,
Commanding.

EDITOR OF HOSPITAL JOURNAL GOES TO SOUTH AMERICA FOR METHODIST CENTENARY.

Hospitals are to be built in the five republics of South America, which, by interdenominational agreement, have been placed under its supervision, by the Methodist Episcopal Church as a part of its Missionary Centenary program, the purpose of which is to raise $120,000,000 (in connection with the southern branch of the denomination) for world upbuilding and the extension of missionary work.

There is at present not one hospital in the entire South American continent under the direction of any American Mission Board. There is one union dispensary in Rio de Janeiro—that is all.

The Methodist Foreign Mission Board has engaged Miss Charlotte A. Aikens, editor of the Trained Nurse and Hospital Review (New York) to tour Argentina, Uruguay, Chile, Bolivia and Peru to study the needs of the field and the conditions which prevail there. After her report has been received the number and location of hospitals and health stations to be built in the five republics as part of the centenary program will be announced.

Miss Aikens, after a post-graduate course in nursing at Polyclinic Hospital, New York, was in succession superintendent of the Sibley (Methodist Episcopal) Hospital in Washington, D. C., of the Iowa Methodist Hospital in Des Moines, and of the Columbia Hospital in Pittsburgh. She is known as a writer of text book on hospitals and nurses' training. She has been given a leave of absence by the Trained Nurse and Hospital Review to make the South American trip for the Methodist Missionary Centenary.

CHURCH ORGANIZES MEDICAL BOARD TO SUPERVISE HEALTH OF ITS MISSIONARIES.

A medical department, under the direction of the Board of Foreign Missions to guard the health efficiency of its missionary workers, has been established by the Methodist Episcopal Church in connection with its missionary centenary to raise $120,000,000—$85,000,000 for the Church North and $35,000,000 for the Church South—for general world upbuilding and the extension of its missionary work at home and abroad. No other church has organized such a department.

Dr. J. G. Vaughan, M. D., formerly of Nanchang, China, is executive secretary of the new department with temporary offices at the headquarters of the Missionary Centenary, 111 Fifth Avenue, New York. Dr. Vaughan was graduated from the Northwestern Medical School, Chicago, in 1907, and for six years was a medical missionary in China. On his return to this country in 1916 he became connected with the office of the chief surgeon of the Chicago, Rock Island & Pacific Railroad in Chicago. He left that position to organize the new medical department of the Methodist Foreign Missionary Board.

Missionaries on the field and on furlough will have the benefit of counsel from the new department, while all candidates will undergo their medical examinations from the physicians in charge.

To provide for the best service in this respect, suitable offices and equipment will be obtained, with a sufficient staff of trained workers to meet the increasing demands arising from the enlarging force which the centenary program will require in the field. The church invests from $20,000 to $50,000 in each missionary for life work and it will be one of the duties of the medical department to see that each person accepted is a "good risk." Supervision of the health of the workers in the field will gradually be taken over by the new department.

The Council of National Defense authorizes the following:

Early in February each physician in the United States exclusive of those who served in the Medical Corps of the Army, for the past two years, and members of the Volunteer Medical Service Corps, received a communication from the Council of National Defense, requesting that he fill out and return promptly to the Washington office an accompanying questionaire, so that there may be on file in Washington complete individual information covering the members of the profession. Simultaneously with the distribution of these questionaires, state and county representatives of the Volunteer Medical Service Corps were instructed to urge all doctors in their communities to comply promptly with the request of the council to fill out and forward promptly to Washington the blanks sent them; and to advise those who by any chance failed to receive blanks, to communicate with the Council of National Defense at once in order that application blanks might be furnished them.

The Volunteer Medical Service Corps was organized early in 1918 to serve the government during the emergency of war. As this emergency has ceased to exist, active membership in the corps is no longer solicited. However, the survey initiated by this organization last year has proved of such value as a source of information concerning the individual members of the medical profession that the Surgeon General of the Army, Navy and Public Health Service have requested the Council of National Defense to complete it so as to include every doctor in the country, in order

that a permanent record of the profession may at all times be available for reference in future emergencies. Upon their completion, the records will be transferred to the Surgeon General's of-Library, where they will be kept up to date by a force assigned for the purpose, and be accessible to all government bureaus.

Every physician is requested to cooperate with the Council of National Defense in making this record complete by returning at once the questionaire received or by writing to the medical section of the Council of National Defense, Washington, D. C., and requesting that a blank be sent him if through an oversight he did not receive one.

SPECIAL COURSE IN MUSCLE TRAINING.

The Department of Reconstruction of the Army Medical Department is prepared to admit graduate nurses to a course in Muscle Training, to be given in Boston about February 10. This course is given under the auspices of the Harvard Medical School and is endorsed by the advisory committee on nursing of the Council of National Defense. The course, which is intended primarily for reconstruction aids, is under the direction of Dr. Robert W. Lovett and offers an unusual opportunity, since nurses who have had this training are greatly in demand for reconstruction work and for the after care of cases of poliomyelitis.

Expense: Instruction is provided by the government, hence no charge is made for tuition. All other expenses will be met by the student.

Dates: The course is about eight weeks in ducation, and will open not later than February 10, 1919.

Admission: Only a limited number of nurses can be accepted. Preference will be given to applicants with higher educational and professional qualifications. No entrance examination is required but students who prove unsatisfactory will be expected to withdraw from the course.

Further information in regard to the course of study and positions available after completing the course may be obtained from the Harvard Graduate School of Medicine, Boston, Mass.

APPLICATION

Nurses wishing to apply for admission to the course are requested to fill out this blank fully and return it immediately to the chairman Committee on Muscle Training, 561 Massachusetts Avenue, Boston.

1. Name in full.....
   .....
2. Address .....
3. Place and date of birth.....
   .....
4. State number of years of work you have had:
   (a) In high school.....
   .....
   Did you receive a diploma?.....
   (b) College .....
   Did you receive a diploma?.....
   (c) Other educational institutions.....
   .....
   Did you receive a diploma?.....
5. Name and address of Nurses' Training School .....
   .....
6. Date of graduation from Nurses' Training School .....
7. State in which you are registered, with date of registration.....
   .....
8. Name positions you have held since graduation .....
   .....
9. Give names of two persons not relatives to whom we may refer in regard to you.....
   .....

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., Editor
C. R. ENSLOW, M. D.
J. E. RADER, M. D. Assistant Editors

Huntington, W. Va., March, 1919

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

ADVERTISEMENTS

Advertising forms will go to press not later than the 10th of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible..

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Dear Dr. Bloss:—

Please insist upon the members sending in their dues at once. Remember that they are Four Dollars without Defense and Five Dollars with Defense. Also urge that those who will prepare papers for the Clarksburg meeting, please to communicate with me at once.

Fraternally,

J. HOWARD ANDERSON,
Secretary.

Both the issues for January and February, 1919, have been exhausted and we are in need of about ten copies of each issue. It is requested that a few of the members who do not preserve their Journals for binding be kind enough to send them in to us. I assure you it will be appreciated.

THE SUPPLY OF PRACTICAL NURSES.

What's the matter with the trained nurse? A wave of harsh and resentful criticism of the professional nurse seems to be sweeping over the country. In spite of a recognition of her splendid achievement in remaking hospital nursing, and of setting up high standards for private nursing; in spite of her magnificent and sacrificial service in the great

war, she is not now viewed by large numbers of physicians and laymen as a ministering angel of mercy or as an unmixed blessing. And when rebuked for these harsh expressions of disapproval, her unfeeling critics forcefully reply: "She is getting just what she deserves." What does it mean?

Is it because through high standards of admission to her schools, and long years of training before she is graduated she has chosen to make herself one of a small body of elect, a superior being? Is it because with the high cost of living and the scarcity of these chosen few she has, labor-union-like, demanded higher pay which only the well-to-do can give? Is it because in the home she is autocratic and unwilling to serve except in accordance with rules that she herself lays down often demanding that service be rendered her and causing discord in the household management at a time of crisis? Is it because in many hospitals she has gradually acquired more influence and power until through her officials she speaks with authority even to the management, and dictatorially demands that before the interests of the medical staff are considered —sometimes even before the interests of the patients—there must be considered those of the nurses? Perhaps there is a little truth in each one of these reasons. Perhaps in this resentful criticism, narrow as it may be, the nurses are reaping what they have sown.

The war and the epidemic of influenza, with the consequent scarcity of nurses, have acutely drawn attention to the trained nurse and to the fact that she does not supply the suitable agent for ministering to the large body of the ill. The very poor may get free nursing in the hospitals or, if lucky, at their homes through charity; the rich can and will pay whatever may be demanded, but the large mass of people of moderate means, too self-respecting to accept charity, not able to pay the high price of the expert nurse, must be deprived of her services or secure them at what to these people is often a ruinous sacrifice. More than this: a nurse of the highly trained type is not necessary or even desirable in the vast majority of cases of illness.

What are the requirements of a capable, skilled nurse, a physician's assistant? First, a right personality; without this she is hopeless. Then, intelligence, by which we mean a readiness of comprehension and understanding. Further, she should be of fair education, able to make herself understood, to write, to read, to reason. Lastly, she sould have had training of sufficient length, probably one year, in a good hospital. This training should teach her the proper bed care of the ill, the preparation of food, the management of the patient—not his illness—and the methods of administering drugs and other remedial agents. She should learn enough of anatomy so that she will not, with her hypodermic syringe, enter the brachial artery; she should know enough of symptomatology to sense the possible significance of blood in the stool or of abdominal pain in typhoid; she should know enough pathology so that she will not wilfully violate the physician's orders against massaging a thrombosed femoral vein; she should have enough theoretical and practical training in bacteriology so that aseptic methods are to her, through her grasp of the reasons underlying them, methods to be scrupulously followed.

It goes without saying that other things—personality, native intelligence, etc.—being equal, the college or high school graduate will grasp these facts more readily and will, to this extent, be more competent nurse. But such superknowledge is not necessary. For 90 per cent of cases of illness, a skilled nurse

with the characteristics just enumerated and with one year's training will answer fully as well and will fit into the average household better. She will be a true physician's assistant and will be a household helper not too proud to assist in the kitchen or even to help care for the baby. If this is true, why should not this capable woman of ordinary but sufficient ability and training be allowed to practice her profession licensed by the state and earning an honorable livlihood?

There is a place for the highly trained nurse, the registered nurse of today. From their ranks will come the superintendents of the training schools of various grades, the head nurses in our hospitals, the nurses in our operating rooms, nurses for cases of special severity or complication, and the teachers of nurses. Let the training schools preserve their high ideals, though there may be question as to the necessity or wisdom of requiring even a high school degree for admission or a three year's course of training except in special cases or for postgraduate work. For her own good let the nurse be a little less autocratic, a little less dictatorial, a little more human. *Non ministrari sed ministrare* is as good a motto for a training school as for a woman's college. The trained nurse from having been a luxury has become a public necessity, like the telephone and railroad. Should not methods less like those of selfish private ownership give way to those wherein service to the sick public is the paramount aim?—*Jour. A. M. A.*, Jan. 25, 1919.

During January the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Dermatological Research Laboratories: Neoarsenobenzol.

Guiseppe W. Guidi: Ittiolo.

Merck and Co.: Digitan, Digitan Tablets, 1½ grains; Quinine Ethyl Carbonate—Merck.

Monsanto Chemical Works: Chloramine-T, Monsanto.

STATE NEWS

THE HARRISON ACT.

As amended by the new War Revenue Act, will be mailed postpaid to any druggist, physician, dentist or veterinarian who will send a postal request therefor to "Mailing Department, Parke, Davis & Co., Detroit, Mich." Please observe directions strictly.

* * *

Lieut. C. A. Willis of Clarksburg, is stationed at Petersburg, Va. Infirmary Provost Guard Company, Camp Lee.

* * *

Capt. T. N. Goff of Kenova, is now at Tulane University, New Orleans, after being at Chickamauga Park, Ga.

* * *

The name of Miss Alice M. Young of Wheeling, appears in the Red Cross Bulletin list of nurses who died of influenza in military service in the United States.

* * *

Dr. Paul D. Messman, formerly of Welch, is now located at Lexington, Ky.

* * *

Dr. Ben F. Brugh, late of Hansford, is now located at Montgomery for the practice of his profession.

* * *

Major Richard P. Bell, Staunton, Va., who has been chief surgeon of Base Hospital No. 53, with the American Army in France, expects to return home shortly.

* * *

Dr. Nellie Yost received a letter recently from her husband Capt. Guy Yost,

medical department A. E. F., now second surgeon at the largest base hospital in France. This hospital has 20,000 beds. His address is A. P. O. 798 Mesos sur Loire, (Licore). At the same hospital is Major W. W. Point, another Huntington physician, and Mrs. Eubanks, a Huntington nurse, who is superintendent of one of the base hospital units.

Dr. Yost is well pleased with his surroundings, but was distressed when he wrote because he had not heard from home since he left the states. He wrote the day after Christmas and his letter gives an account of a very satisfying dinner.

The letter speaks of the popularity of the Red Cross and the Salvation Army and the unpopularity of the Y. M. C. A.

* * *

Major L. F. Boland, of Stone, Ky., who recently returned from France, where he was attached to the medical corps, has been a visitor in Huntington the past few days. He was formerly chief surgeon at the hospital of the Pond Creek Coal Company in Kentucky. He received a wound in the hand and was gassed while on active duty in the Argonne Forest. For a while he was attached at a British field hospital.

* * *

Dr. J. M. Teter, formerly located at Riverton, is now at Petersburg, W. Va.

* * *

Dr. Harry Werner of Davis, has sold his practice to Dr. Roth of New Jersey. Dr. Werner will hunt bear in the Rockies for a short time before locating.

* * *

Dr. Daugherty is home from the army and is located in Davis.

* * *

Dr. William C. McCord, formerly of Huntington and Marlinton, is in Columbiana, Ohio, where he has quite an extensive practice.

Dr. Richard O. Rogers, of Crystal, is with the British Army now occupying the part of the Rhine in Germany assigned to the British. Since being in the British Army he has been commissioned a captain. He is attached to the First London Scottish.

* * *

Dr. O. W. Sedgwish is located at Crystal and is doing the work of Dr. Rogers and the Thomas Coal Companies in his absence.

* * *

Dr. A. P. Butt of Davis, left recently for Ft. McPherson, where he visited his friend, Lieut.-Col. W. W. Babcock, (M. D.) He was joined there by Mrs. Butt and they spent some time in Florida. From there Dr. Butt will go to New York hospitals.

* * *

Lieut.-Col. Stuart McGuire of Richmond, is expected home from France in a short time.

* * *

Capt. W. E. Vest of Huntington, who has been in the army service, had a short furlough recently from Camp Wadsworth, Spartansburg, S. C. He hopes to receive his discharge in the spring and will resume his work at the C. & O. hospital in Huntington.

* * *

Dr. I. C. Hicks of Huntington, accompanied by his wife and daughter, are spending some time at Palm Beach, Fla.

* * *

A new city hospital has been opened in Huntington at Jackson Avenue and Seventeenth Street. The property was bought by the city for $10,000. Mrs. E. Davis has the management of the institution.

* * *

Dr. E. B. Gerlach recently returned from army service has resumed his practice in Huntington.

Dr. J. Ross Hunter of Huntington, was called to the Sheltering Arms Hospital, Hansford, on a professional mission recently.

* * *

Dr. Chas. Ryan, formerly of Wheeling, is now located at Dayton, O.

* * *

The services of Dr. Carl F. Raver have been secured as epidemiologist in the State Department of Health in Charleston. Dr. Raver has received three degrees from the University of Michigan, namely, M.D., B.S., in chemical engineering, Master of Public Health. He has had five years' experience in public health work.

* * *

Capt. L. T. Vinson, of Huntington, U. S. Medical Corps, who has been stationed at Camp Hancock, Augusta, Ga., the past few months, has returned to Huntington where he will resume his duties in the practice of medicine.

* * *

Twenty-four thousand soldiers have been discharged from the army as tubercular since the beginning of the war, the Senate Buildings Committee was told by Dr. W. G. Simpson of the United States Public Health Service. He said the history of tubercular patients indicated that they would be in the hospitals one-third of the time. Tentative plans of the Public Health Service for adding 2,000 beds to existing hospitals were described.

* * *

Dr. William R. Strange, 1018 Seventh Avenue, who has recently returned to Huntington, will become associated with Dr. J. A. Guthrie in the Guthrie Hospital as resident physician. Dr. Strange will not practice, but devote all his time to hospital work and will do x-ray work.

Dr. Strange was a member of the medical reserve when the armistice was signed.

Dr. L. V. Guthrie, superintendent of the Huntington State Hospital, accompanied by Mrs. Guthrie, left February 16 for Florida on his annual vacation.

* * *

Dr. R. E. Hardwick of Huntington, is in Florida and Cuba, visiting points of interest for several weeks.

* * *

Dr. and Mrs. T. W. Moore of Huntington, spent some time in New York in February. While away Dr. Moore attended clinics and medical meetings.

* * *

Dr. and Mrs. J. A. Guthrie of Huntington, were recent visitors in New York.

* * *

Dr. Carl F. Raver, assistant to the State Health Commissioner, has issued warning to physicians to comply with the law requiring them to report births properly to the state department. He states many such certificates received from physicians are not filled out in full and often fail to give either names or dates of births. He calls attention to the importance of furnishing such statistics and points out the difficulties encountered by some young in the military draft on account of not being able to show records of birth dates.

* * *

Dr. Samuel R. Holroyd of Athens, former president of the West Virginia State Medical Association, has been appointed to the superintendency of the State Hospital for Insane at Spencer by Governor John J. Cornwell.

* * *

The following West Virginia physicians have recently been honorably discharged from the service:

Capt. A. M. Fredlock, B.-R.-T. Society.

Lieut. J. W. Ballard, B.-R.-T. Society.

Capt. M. D. Cure, Lewis County Society.

Capt. S. H. Burton, Lewis County Society.

Capt. W. H. Green, Lewis County Society.

Capt. E. T. W. Hall, Lewis County Society.

Lieut. G. L. Wyatt, Greenbrier Valley Society.

Lieut. C. F. Mahood, Greenbrier Valley Society.

N. E. Steele, Logan Society.

D. M. Ryan, Summers Society.

S. A. Salton, Mingo Society.

* * *

The following deaths of members of the State Association have been reported, but no dates have been secured.

G. O. Quesenberry, Hinton, Summers Society.

C. M. Arnold, Green Sulphur, Summers Society.

G. C. Shuler, Great Capacoon, Eastern Panhandle Society.

* * *

Dr. and Mrs. C. T. Taylor, of Huntington, spent several weeks in Florida in February, at Claremont.

SOCIETY PROCEEDINGS

The Little Kanawha and Ohio Valley Medical Society met at the Chancellor Hotel on Thursday, February 6, 1919, at nine p. m., the President, Dr. R. B. Miller in the chair. Present Drs. Rose, Muhlman, Stille, Price, Douglas, T. L. Harris, Wise, Richardson, Jeffers, Prunty and Giltner.

The minutes of previous meeting were read and approved.

Resolutions were passed regarding state legislation for pay of physicians testifying as experts and for state regulation for testing of cattle for tuberculosis. The secretary was instructed to send copies of these resolutions to state senators and delegates.

Dr. R. B. Miller read a reprint from the Mayo clinic entitled, "Surgical Complications of Pregnancy," to which he added descriptions of personal cases.

Delegates to the State Association were elected as follows: Drs. L. O. Rose and H. A. Giltner. Alternates, Drs. E. H. Douglas and C. E. Grimm.

A motion was passed empowering the secretary to arrange for an essayist from out of town for next meeting and authorizing a banquet to precede the meeting.

There being no further business the Society then adjourned.

H. A. GILTNER, *Secy.*

* * *

January 22, 1919.

The West Virginia State Medical Journal, Huntington, W. Va.:

Today we had our first meeting of our society for 1919. Nineteen eighteen was a prosperous year for our society. Dr. N. P. Bonar, our retiring President, deserves much credit for the interest he took in the society. We had our regular monthly meetings with a scientific program until the State Medical Meeting and the flu visited us. This year we anticipate the best year of our society.

Dr. M. B. Williams, City Health Officer of Wheeling, gave us a very able paper on Flu, with a report of the Chicago convention.

The report of the special committee of the Chicago Convention was especially interesting.

Our new officers for the year are:

President: Dr. C. E. Hutchinson.

Vice-President: Dr. J. C. Peck.

Secretary: Dr. Robert A. Ashworth.

Treasurer: Dr. O. P. Wilson.

Delegate: Dr. J. H. Linkhart.

Alternate: Dr. J. W. Rickey.

Censor. Dr. O. F. Cavert.

The following physicians were present: J. J. Duffey, O. P. Wilson, J. W. Rickey, C. S. Fortney, Chas. G. Morgan, J. C.

Peck, Harriett B. Jones, O. F. Covert, W. P. Bonar, C. E. Hutchinson, L. H. McCuskey, D. Ruckman, Mrs. C. S. Fortney, Robert A. Ashworth, J. H. Linkhart, M. B. Williams.

Yours fraternally,

ROBERT A. ASHWORTH, *Secy.*

* * *

MARSHALL COUNTY

The Mercer County Medical Society met in regular session January 23, 1919, in the offices of Dr. A. D. Wood, Bluefield, W. Va., at 8 p. m. As it was the first meeting we have had since September, 1918, on account of the epidemic of influenza, we had a large attendance. The meeting was called to order by President Fox, the minutes were read and adopted. Next on the program was the scientific program. Subject was Influenza, complications and treatment of which proved to be a very interesting topic, and many valuable points were brought out. After the discussion, the president announced that the election of officers was next in order. Following officers elected for the ensuing year:

Dr. J. A. McGuire, Princeton, W. Va., President.

Dr. B. W. Bird, Princeton, W. Va., First Vice-President.

Dr. W. H. St. Clair, Bluefield, W. Va., Second Vice-President.

Dr. J. E. Martin, Bluefield, W. Va., Third Vice-President.

Dr. E. H. Thompson, Bluefield, W. Va., Secretary.

Dr. T. E. Peery, Bluefield, W. Va., Treasurer.

Dr. W. W. Morton, Bluefield, W. Va., Censor for three years.

Delegates to State Association for two years, Dr. C. C. Peters, Princeton, W. Va., and H. G. Steele, Bluefield, W. Va. Dr. S. J. Kell's application was read and reported favorable by the Board of Censors. Motion was made and he was unanimously elected to fellowship in this Society. The Society was honored by having with them Dr. F. F. Farnsworth, director of the Bureau of Venereal Diseases of this state, who addressed us outlining the duties of his office, and what he expects of the doctors in cooperation with him in his work. His address was enjoyed by all, and we feel sure that he will get the entire support from the Mercer County Medical Society.

After adjournment the members present retired to the Commercial Hotel, where they enjoyed an elaborate banquet, which had been prepared for them

Visiting members present were: Dr. H. B. Frazier, Graham, Va.; Dr. Frank Pyott, Tip Top, Va.; Dr. P. D. Johnson, Tazewell, Va.; Dr. C. A. Easley, Bluefield, W. Va. We enjoyed having them and hope that they will come again.

Dr. S. R. Holroyd, who is leaving his field of labor to enter on his new duties as superintendent of Spencer Hospital, gave us a farewell address, assuring us of his regrets at having to separate his fellowship with this society, and states that he will think of us all the third Thursday of every month, and hopes the society will remember him on that date. The society deeply feels the loss of Dr. Holroyd, as was stated by the president, and wish him the utmost success in his new field.

The Secretary and Treasurer desire to call attention that the members of the society, to be in good standing, shall pay his dues by April 1, 1919. They hope to receive their dues promptly.

The society adjourned to meet in Princeton, W. Va., the third Thursday in February, 1919.

E. H. THOMPSON, *Secy.*

MEDICINE

CHOLECYSTITIS

W. D. Bodenstab, Bismarck, N. D. (*Jour. A. M. A.*, July 7, 1918), says that in studying the mortality records he has been impressed with the fact that many deaths would be prevented if acute intra-abdominal lesions received earlier surgical attention, and he specially refers to disease of the gall-bladder or ducts. The practice of waiting for jaundice to appear is still too general. He has, therefore, reviewed the histories of the last 500 cases of inflammation of the gall-bladder operated on in their clinic and has divided the series into two groups, namely, those in which stones were found and those in which no stones were present though pathologic conditions existed. In the first group there were 340 cases and in the second 160. The symptoms in these cases are shown in a table and the most constant one was tenderness over the gall-bladder region. Belching is mentioned as next in frequency. It was observed in approximately 80 per cent of the cases with stones, and in nearly 67 per cent of the cases without stones. He considers it an important diagnostic symptom in differentiating cholecystitis from gastric ulcer. In cholecystitis belching is independent of the taking of food. Vomiting is another symptom due to the antiperistalsis forcing bile into the stomach where it acts as an emetic. He has found it a good rule to follow, when vomiting is present in an upper abdominal lesion, and pyloric obstruction can be excluded, to look to the gall-bladder as the offending organ. The next symptoms are radiating cramps causing the typical gallstone attack during which deep respiration gives pain and causes marked shortness of breath. Many patients suffer from epigastric distress, which causes far more annoyance than the local gall-bladder manifestations. Extreme prostration and feeling of impending death is much more common when stones are present, and in any case is almost pathognomonic of gall-bladder obstruction. When the radiated pains are followed by jaundice the diagnosis is nearly made. In only 20 per cent of stone cases was there a history of epigastric cramps that were not radiating, but such occurred in 52.5 per cent of the cases without stones. If urines in all cases of gallstone colic were examined within approximately twenty-four hours, about 80 per cent would react positively to bile. Later the percentage is much smaller. The percentage of men and women suffering from cholecystitis has been variously estimated, but in their series they found thirty-six men and 304 women harboring stones, but in the second group, or that without stones, the proportion of men was much higher, namely, forty males and 120 females. This suggests the theory of the causation of gall-bladder disease by pressure from tight bands, etc. How far pregnancy is an etiologic factor has not been proved. In acute cases there was usually hyperacidity of the stomach, while in chronic cases the stomach acidity was low. A table is also given of the percentage of these symptoms in the cases. Bodenstab is rather skeptical of the value of the roentgen ray in demonstrating gall stones. In consideration of all the facts he thinks it logical that the older methods of diagnosis are still the ones on which we must most rely, but he emphasizes the importance of early diagnosis and surgical treatment. A complete history of the cases is still the greatest aid in the diagnosis.

VISCERA SYMPTOMS IN NERVOUS DISEASES

F. X. Dercum, Philadelphia (*Journal A. M. A.*, July 13, 1918), calls attention

to the tendency of modern specialism to narrow the diagnostic view and cause misinterpretation of symptoms. This is especially apparent in regard to nervous diseases where visceral symptoms, or symptoms simulating visceral disease, are extremely common and may lead to needless surgical interference or medical maltreatment. This may not be altogether the fault of the internist or of the surgeon. Neurologists have too frequently given themselves up to vague speculations and even to metaphysical explanations. Of late years, too, we have the Freudian dictum of the psychogenic and sexual origin of all nervous symptoms, which leads to an unfortunate situation. Leaving this aside, however, Dercum says let us make amends to the internist and the surgeon by meeting them on the common ground of rational and scientific medicine. It is impossible also to consider radically the subject of the visceral symptoms of nervous disease, and the author confines himself in his remarks to general principles, taking up first the functional disorders. The neuroses separate themselves rationally into, first, neurasthenia, the neurosis of chronic or persistent fatigue; second, psychasthenia, an infection made up of an existing neuropathy plus nervous exhaustion; third, hysteria, the disease of suggestion; and last, hypochondria, an affection in which, without real organic or functional disturbances, the patient suffers from a fixed conviction of disease. Among physicians and even among neurologists the serious study of neurasthenia has been too much neglected and they have failed too often to make the distinction between neurasthenia and the general weakness sooner or later accompanying visceral disease. If we limit the application of the term neurasthenia to the symptoms arising in persistent or chronic fatigue, the clinical picture clears up and it is possible to make a definite symptom-group apparent. He mentions the sensory and motor symptoms as well as the psychic ones, but it is especially the somatic phenomena of neurasthenia that are here involved. The point of importance to be borne in mind is not to forget the general condition or to overvalue the symptoms. Such a diagnosis as that of angina pectoris when the symptoms are only those of a neurasthenic cardiac attack is most unfortunate. The picture presenting itself in hysteria is still more interesting and important, and one must here keep in mind the factor of suggestion which may cause multiple symptoms suggesting organic disease. The so-called painful stigmata are the most frequent of all the phenomena of hysteria and are often the cause of misled diagnosis. Dercum says that he can truthfully say that he rarely has a patient of hysteria admitted to his wards without its showing the scars of one and often of many and repeated surgical operations. He has repeatedly had the experience of receiving patients on whom a first operation for appendicitis has been performed with perhaps the removal of the right ovary, then removal of a second ovary, next a hysterectomy, and finally other procedures such as removal of the coccyx or perhaps some operations on the gall-bladder. The pains of hysteria are distinguished from the pains of true visceral disease by the fact that they are purely superficial and are also over other parts. Symptoms of the special sense organs are often present and the suggestibility of the patients is shown in their desire to present the symptoms that may mislead. In psychasthenia the syndrome may be complicated, but if visceral symptoms are present to any extent they are of the same general character as those in neurasthenia. In organic nervous disorders he says the diagnosticians may be

misled by visceral symptoms complained of by the patient. He has repeatedly met with tabetic and paretic patients who have been subjected to needless surgical operations, and he insists on the importance of a thorough neurologic examination in all cases.

INDURATIVE HEADACHE

H. T. Patrick, Chicago (*Journal A. M. A.*, July 13, 1918), gives his experience with indurative or rheumatic headache, our knowledge of which, he says, is about the same as it was when the benefit of massage in its treatment was discovered thirty odd years ago by Scandanavian masseurs. In the meantime, the author says, a lot of nonsense has been perpetrated and perpetuated regarding it. Now and again it has been artificially expanded to take in migraine, neurasthenic headache, neuralgia and practically all pain in the nead except that of grave intracranial disease. Its existence should be acknowledged by every careful observer and, while it is not common, it is far from rare, and if not mistaken for something else, is worth recognition, and proper treatment will practically always cure it. It may be acute, but most cases are subacute or chronic. It affects women more than men, apparently, but seems to be rare in persons under 20. More than half the patients are over 40. It is a real pain, which may be intense or only nagging; it may be remittent or intermittent or have exacerbations. It is different from neuralgic paroxysms and does not have the long spells of freedom as does migraine. Nausea and vomiting are not in the symptomatology. It has its good, better and bad days like rheumatism, and may be worse at certain times of day. It is especially an occipital headache, and never a frontal or vertical one alone. Patrick has known it to be parietal, which is rare, though it may radiate from the occipital to all parts, and even down the neck and into the shoulders. Tenderness to pressure is characteristic. There is none of the surface sensitiveness that is sometimes felt after migraine. The muscular insertions on the occiput, the upper neck at the rear and sides, and the occipital aponeurosis of the occipito-frontalis should be examined particularly for pain on pressure. The Scandinavian discoverers always found exudated lumps or nodules emphasized by later writers, but Patrick thinks that the ordinary practitioner will not often find them. If indurative headache really is a rheumatic affection one would expect often to find other evidences of so-called rheumatism. And such is the case. This is most frequently evidenced by pain on movement of the neck. Spinal joints lower down may also be implicated. Patrick is skeptical as regards the nodules and their universal appearance. Their only real demonstration that can be claimed is that of Auerbach, who extirpated a node, finding the nerve endings in it encircled by connective tissue, but he found exactly the same thing in a case having no indurative headache. To Patrick, a toxic infection can reasonably be considered the cause of rheumatic headache, and he quotes with modified approval the views of Hartenburg and Telling, who have suggested a toxic origin. What we need is competent histologic and bacteriologic study of the disease, with observations on the blood and on the tissues, particularly for lumps or nodules emphasized by later writers, but the author has not seen such on record. In the acute cases fever and leukocytosis are never absent, but they may sometimes be surprisingly light in fairly acute cases. The author has not always succeeded in finding a source of this toxic condition, epecially in the chronic cases. In the acute ones, he thinks he has. The

source is practically always in the head —the throat, teeth, sinus, ear or suppurative rhinitis with poor drainage, the removal of which relieves the headache, though it is not always easy to decide which, and sometimes no focus is apparent. As regard diagnosis, a few suggestions seem indicated. Severe organic disease may be strongly suggested, but a thorough neurologic examination should exclude it. Severe headache, worse at night, suggests syphilis, but taken in connection with the other symptoms of that disease, differentiation should be easy. Blood and spinal fluid examination may be called for. In a chronic neurasthenic or psychasthenic condition a rheumatic headache may be superinduced from a toxic cause and such cases are sometimes very misleading. We may have to clinically separate sinusitis as due to the same cause. The rational treatment is to find and remove the origin. In acute cases this will suffice. In chronic cases hot applications and massage are advised, and in a few cases he has used thermocautery with benefit. The prognosis is good, much better than that with chronic arthritis.

TUBERCULOSIS

Dr. Paul Armand De Lille of the French Army, at present on a special mission to the United States, describes the methods of meeting infantile tuberculosis in France (*Journal A. M. A.*, July 6, 1918). He finds that there has been great exaggeration as to the prevalence of this disease in France and figures out that among the 37,000,000 inhabitants in France only 250,000 are actually tuberculous. Association with tuberculous parents is the principal cause of the infection of children, much more than milk infection. The author gives a history of the early efforts at curing tuberculosis in children by seaside sanatoriums, etc. During the past ten years heliotherapy has been added as a therapeutic factor. It is impossible, however, numerous as the sanatoriums are, to receive all the little patients in France. The author describes the work of Dr. Grancher, who started the efforts for the preventive treatment and for the cure of latent cases by open air schools and sanatoriums. His idea was to place the healthy children or those in whom there was only a commencing possibility of the disease in healthy families where they might be adopted. This especially applies to the children of alcoholic and diseased parents in Paris. These are transported to healthy families in the country, in regard to whom Dr. Grancher was informed by his medical correspondents in the district. It was necessary for these to be financially disinterested, and the country doctor with his usual large practice was able to select benevolent individuals who would receive them. In the beginning they were placed among families with other children, but this caused other problems and inconveniences and more recently well-to-do childless families have been selected. The Grancher Society acts as a guardian to these children and avoids separating brothers and sisters. Where the parents are cured or reformed the child is returned to them at the age of 13. A certificate is required as to the condition of the father and mother and the birth and baptismal records are also demanded to place the children in the religious surroundings desired. Only the practically healthy children are taken. Those in whom the disease has actually begun are sent to the sanatorium schools. The danger of contamination from diseased parents or other children is considered practically over at the age of 13, and those that are left orphans are adopted morally and sometimes financially by their foster parents. The society accom-

plishing all this (Euvre Grancher) is developing. Before the war it counted 810 children thus cared for, but the war has reduced the number about one-half and has furnished a number of young soldiers to the army. More recently the American Red Cross has taken a hand, together with the Rockefeller Commission in furnishing aid, such as constructing sanatoriums, dispensories, etc., for which France is truly grateful.

CHRONIC SEPTICEMIC ENDOCARDITIS.

David Riesman, Philadelphia (*Journal A. M. A.*, July 7, 1918), says that while we accept our helplessness in cases of malignant growth we chafe against it in the so-called malignant endocarditis. Dr. Libman has shown that patients may become bacteria-free and yet succumb to the disease, which may drag along for months or even for one or two years, but in nearly every case terminates fatally. The symptoms have been well described by Osler, Dock and others. The outstanding features are fever of long duration, anemia, pains in the joints, petechia and heart murmur. Albuminuria is common, and in the later stages there may be signs of true nephritis. Abdominal pains, sometimes sudden in onset, are frequent, and cough and insomnia are often very troublesome. From the diagnostic point of view the heart murmur is most important and the author's impression is that the aortic cases are most common. It usually starts from a previously diseased valve, but it may start on an intact valve. There is a primary chronic form of endocarditis, however, indistinguishable from that in which the lesion is secondary to a previously diseased valve. Another important feature to which Riesman calls attention is the condition of the spleen, which is practically always enlarged and may obscure the heart trouble, leading to a wrong diagnosis of splenic anemia or Banti's disease. Watching a number of cases during the past few years and seeing their hopelessness, the author began to wonder if the heart was altogether to blame and to suspect the possible significance of the large spleen. The spleen is a filter for bacteria, but whether it kills them or only benumbs them is not definitely known. The filtration causes an accumulation of bacteria in the spleen, which leads to a sort of work hypertrophy. The long continued existence of these bacteria in the spleen may be the cause of the fatal termination of the so-called bacteria-free cases. If we could get rid of this disease-harboring focus in the spleen perhaps we could deal better with the bacteria in the heart valve. Another factor is to be considered. Splenic enlargement is chiefly caused by cell proliferation and to a lesser degree by an increased blood content, and this proliferation, according to the theory of cellular toxemia offered elsewhere by Riesman causes the pouring into the circulation of enormous amounts of metabolic products which have to be handled by the liver and other organs. He, therefore, thinks we are warranted in removing the spleen in septicemic endocarditis when it is enlarged, and he reports a case where the operation was performed and while the ultimate outcome was the patient's death it was due to an unusual complication (abscess of the larynx) which occurred some time after the operation. He hopes the operation will be tried by others in similar cases when they have an opportunity. Discussing the nomenclature of the disease, he thinks the title he has adopted is at present the best.

SURGERY

SYSTEMATIC DEVELOPMENT OF X-RAY PLATES AND FILMS.

MILLARD B. HODGSON, Rochester, N. Y.

If the delicate nature and extreme sensitiveness of photographic materials were better understood, there would probably be fewer poor negatives in all branches of photography. In average amateur photography of the better class the operator is usually an enthusiast who has gone to considerable trouble to inform himself of the nature and possibilities of the materials with which he is working. With him it is a recreation. In the case of professional work, the photographer is usually one who has spent years in photographic practice.

With the average radiographer, however, photographic processes are but a means to an end and are very seldom considered as they should be. He fully understands the technic of taking the picture and he is able to interpret radiographs correctly, but too often he loses the efficiency that this knowledge should give him by faulty photographic work.

Few average radiographers have proper dark rooms. Any small cupboard or room may be made into a proper darkroom by observing a few simple rules. First, all cracks and holes for the entrance of outside light should be carefully plugged up. This done, the room should be illuminated by light of photographically safe quality. For a safelight of very moderate cost the Brownie safelight lamy is ideal for a small dark room. For larger rooms, the Kodak safelight lamp or the Wratten safelight lamp may be used. Any of these lamps will provide illumination of safe quality. A convenient bench should be at hand for the manipulation of trays or tanks containing developer, wash water and fixing bath, and, if possible running water should be accessible.

Development is rarely considered as the chemical reaction that it is. The reduction of the photographic image to a silver deposit giving the finished image is a process of extreme delicacy. There is the utmost need of cleanliness, as with any other delicate chemical reaction. There should be a constant condition of temperature, purity of chemicals, and precision of timing. To eliminate difficulties in development so that the operator does not have to be trained chemist to obtain good results the Eastman Kodak Company has prepared certain kinds of developing powders which are of the proper purity and have been precisely weighed. These may be mixed properly by any one if a simple direction sheet is followed.

After the completion of the development of the image, which is one chemical process, another chemical process must take place before the negative is complete, that is, the plate must be fixed, to remove unused and undesired materials. Before using an apparatus in any chemical operation, it is good practice to wash it thoroughly. The same rule holds good good in the case of the photographic plate, which should be washed after the first chemical process (developing) and before the second chemical process (fixing) is performed. Now the finished image consists of a metallic silver deposit, the image, in gelatin. These materials in a dry state are relatively permanent. It is to render them so that all the chemicals which would affect this condition of permanency should be removed by thoroughly washing after fixing. The negative should then be dried in a place where there is no dust.

If these rules are adhered to, that is, 1, development under standard condi-

tions for a fixed time; 2, proper rinsing between development and fixing; 3, thorough washing; 4, careful drying, all negatives that are reasonably exposed should be good negatives. A comparison of the work of individuals using this system, with others using haphazard methods, will be sufficient to prove the point.—(*N. Y. Med. Jour.*)

RUPTURE OF THE UTERUS.

After noticing the comparative infrequency of rupture of the uterus after and because of previous caesarean section Emil Novak, Baltimore, (*Journal A. M. A.*, July 13, 1918), reports a case occurring about six weeks after the usual duration of pregnancy operated on by subtotal hysterectomy with recovery. The rupture was unaccompanied with internal hemorrhage or shock. This observation was not unique, a similar case having been reported before by Neill. The uterine scar seems to have been separated without producing any hemorrhage, perhaps because of the tampon-like action of the fetal head, as it was delivered through the gap. The most important feature of the case, however, is the history of an infected abdominal incision after the previous caesarean section, as it seems to have been demonstrated that a perfectly normal recovery from caesarean section is not followed by danger of subsequent rupture. The invasion of the uterine scar by decidual elements in subsequent pregnancy is probably much less important. In Novak's opinion the occurrence of stitch infection in the abdominal incision after the prior section may be taken as *prima facie* evidence of infection and poor healing of the uterine incision. As held by most obstetriticians the management of caesarean patients in subsequent pregnancies should not be too strongly influenced by the fact that rupture of the uterus occurs in a very small proportion of cases, probably not exceeding 2 or 3 per cent.

TREATMENT OF PLEURAL SUPPURATIONS.

In previous reports Tuffier has referred to the method of treating pleural suppurations by careful disinfection of the pleura with Dakin's or other disinfecting fluids and when disinfection is complete closing the surgical orifice. In other words, the treatment is a transformation of a pyothorax into a pneumothorax which cures spontaneously. In his previous reports Tuffier included only chronic suppurations. The the present report Tuffier deals with recent pleural suppurations. Of these there have been 22, of which 12 were medical purulent pleurisies and 10 suppurative haemothorax cases. Of these cases 7 have been closed and are completely cured; 15 are still under treatment or only a short time closed.

In comparing the functional results obtained in recent suppurations with those obtained in long established suppurations the conclusion is arrived at that as a general rule recent suppurations are easy to sterilize and cure. And seeing that it is so, there ought in future, save very exceptionally, be no cases of chronic empyema. It should suffice to treat medical or surgical purulent pleurisies by sterilization, according to Dakin's or other methods, so as in a short time to be able to close the surgical aperture and effect permanent recovery. After costal resections the retracted lung loses a large part of its functional value. On the contrary after sterilization and early closure of the pleural incision there is little cavity deformation, the lung resumes its permeability and its functions approach the normal. Such verified facts denote real progress in the treatment of intrapleural suppurations.

DAKIN'S SOLUTION AND DAKIN'S OIL IN NORMAL PERITONEAL CAVITY.

Observations are reported by Grey in order to draw attention to the fact that the indiscriminate use of the chlorin antiseptics is not entirely devoid of danger. Both the neutral solution of chlorinated soda (Dakin's solution) and dichloramin-T in chlorinated paraffin (chlorosane N. N. R., "Dakin's oil"), when injected into the normal peritoneal cavity of a dog, led to an inflammatory reaction, the degree of which was directly proportional to the amount of chlorin antiseptic used. With a sufficient quantity (less chlorosane suffices) death ensued. When either of the chlorin antiseptics was injected into the gall-bladder of a dog no abnormal symptoms appeared. Following the injection of chlorcosane, however, the gall-bladder becomes thickened and shrunken, though the remainder of the biliary tract shows no discernible changes. A small amount of chlorcosane, when injected into the normal pleural cavity of an unanesthetized dog, may lead to a rapid (reflex?) death.

Since chlorcosane, particularly, has been used without recognizable ill effects in certain infections of the abdominal cavity, the results from the experiments made by Grey suggest that the wall of an abscess cavity or sinus must play an important part in protecting the peritoneum in general from the effects of the free chlorin. They also suggest that the maintenance of an adequate drainage tract is an indispensable part of the technic for using antiseptics of this nature within the abdomen. Until more evidence is at hand, then, both of the chlorin antiseptics should be used in intra-abdominal infections with caution and certainly only in carefully selected cases.—(*Jour. A. M. A.*, 11-9-18).

TWO YEARS' EXPERIENCE OF SEPTIC WOUNDS IN A V. A. D. HOSPITAL.

A. BLAIR.

The great majority of wounds seen in a V. A. D. hospital are septic and have been treated at the military hospital with indifferent success. Many of the wounds are very foul and many have been operated upon for the removal of bullets, fragments of shell and necrosed bone. The most intractable cases have been wounds of the lower limb with infection of bone or wounds in or about the knee joint.

Conservative treatment is the aim at the hospital with as little operative interference as possible. The patients are given a generous diet and kept in the open air as much as possible. Wherever a foreign body is present, it is removed and drainage established as soon as possible, and at times it has been necessary to re-open a wound or to re-amputate. Exposure of the wounds to the direct sunlight has in almost all cases been followed by good results. Where there is stiffness or contraction, massage is a means of speeding up the healing process.

Many of the various antiseptics have been used with little difference in the results. Where there was a great sloughing of the parts, the damaged tissue that could be reached without much cutting was removed, a stream of warm hydrogen peroxide introduced into every part of the wound and drainage established. Where suppuration was profuse and there was swelling and redness of the parts, hot boric formentations frequently gave good results.—(*Brit. M. J.*, 1918, i, 169.)

LATE ARTICULAR RESECTIONS

G. JEAN.

The author gives short histories of more than sixty cases of late resections on all the large joints.

Shoulder-joint resection almost always gives good results with sufficient mobility.

For the elbow-joint the author recommends Ollier's subperiosteal resection, following it as typically as possible. The postoperative treatment demands special care. The surgeon himself should personally see to the dressings, immobilization, and passive and active movements to obtain a perfect functional result with a mobile joint.

Resection of the wrist-joint gives only slight mobility.

Resection of the hip is always very serious and the author's cases have given an 80 per cent mortality. He prefers an anterior incision because it preserves the insertion of the pelvi-trochanteric muscles.

Fractures of the knee are always dangerous and the author recommends immediate amputation: (1) in old and discharging fractures with fever and a bad general state; (2) when the length of the injury exceeds 10 cm.; (3) when the principal injury is tibial. Resection is recommended when the general state permits; abstention with general curettage and heliotherapy is recommended for cases with anlylosis and fistula.

Resection in the ankle joint, astragalectomy without removal of the malleolus, gives satisfactory results.

Partial amputation of the foot seems preferable to the author for severely infected fractures of the tarsal bones with large defects in soft spots, whereas in old fractures with a fistula, curettage alone often brings about complete recovery.—(*Lyon chirurg.*, 1917, xiv, 1055).

PITUITRIN; ITS VALUE IN POST-OPERATIVE TREATMENT.

N. DAVIS AND R. OWENS.

The fear of post-operative nausea, vomiting, and gas pains deters many from submitting to abdominal operation. the gas pain problem has been solved by the use of pituitrin hypodermically.

The method used is as follows: The administration of morphine, gr. 1-6, and atropine, gr. 1-180, hypodermically one hour before operation. Immediately after operation the administration of one ccm. of pituitrin hypodermically. This same dose is repeated in two hours; two hours later ½ ccm. and four hours later another ½ ccm. Where too much handling of the viscera has not occurred, no more pituitrin is given; but in severe operations, doses of ½ ccm. are continued every four hours until twenty-four hours following operation. Twenty-four hours after operation 3 gr. of calomel in ½ gr. doses are given every half hour, followed by a saline cathartic.

A series of 126 cases are reviewed, of which 104 were non-septic and 22 septic. In addition they encountered nine cases of eclampsia in which treatment as outlined was given, but over a longer period of time. In these cases it was noted that the urine output commenced earlier and was less scanty.

From their series of cases, the conclusions are drawn: (1) Pituitrin is a valuable drug in stimulating the muscular coat of the intestine after abdominal section in non-septic cases. (2) It is of decided aid in preventing post-operative shock in non-septic cases of abdominal section, as evidenced by lack of rise of

temperature or pulse-rate. (3) It does not appear to have any influence in cases complicated with septic peritonitis. (4) It stimulates the secretory activity of the kidneys in eclampsia. (5) It materially reduces the post-operative suffering.—(*N. Orl. M. & S. J.*, 1918, ixx, 712.)

BOOK REVIEWS

INFORMATION FOR THE TUBERCULOUS.

By F. W. Wittich, A.M.M., M.D., Instructor in Medicine and Physician in Charge of Tuberculosis Dispensary in the University of Minnesota Medical School; Visiting Physician to University Hospital, Minneapolis.

This little brochure answers many questions by those who may be or are becoming tuberculous as to self care and the best treatment to be obtained. The author having been a patient of "no light infection" at Saranac Lake and having recovered, is entitled to speak understandingly upon the subject. Published by the C. V. Mosby Company, St. Louis. Price $1.

MENTAL DISEASES

A hand book dealing with Diagnosis and Classification, by Walter Vose Gulick, M. D., Assistant Superintendent Western State Hospital, Fort Steilacoom, Washington. Illustrated. St. Louis. C. V. Mosby Company, 1918. The ever-changing grouping and names of mental affections by the alienist renders the production of such a book as this almost a necessity. The physician in court, or conducting office or public examinations of the insane will accept this book with relief. Several of the most important types are well illustrated and the book is recommended to every general practitioner who may come in contact with these types of mental disorders.

DISEASES OF THE MALE URETHRA, INCLUDING IMPOTENCE AND STERILITY.

By Irvin S. Koll, M.D., Prof. of Genito-Urinary Diseases, Post-Graduate Medical School and Hospital, Chicago . Octave of 151 pages, with 123 illustrations, several in colors. Philadelphia and London. W. B. Saunders Company, 1918. Cloth. $3 net.

This monograph on a deeply interesting subject is the result of the author's personal experience in his capacity of teacher of both undergraduates and post-graduate students. The treatment of the subject is clear and concise which qualities are greatly enhanced by the illustrations. The illustrations are beautiful and are claimed to be almost entirely original and taken from the author's clinics. The paper is of excellent quality and the whole book one of value to both student and practitioner.

CONCERNING SOME HEADACHES AND EYE DISORDERS OF NASAL ORIGIN.

By GREENFIELD SLUDER, M. D.

Any book by Dr. Sluder on this and other subjects could not fail to be interesting and instructive.

The author is well known to the profession as Clinical Professor and Director of the Department of Laryngology and Rhinology, Washington University Medical School, St. Louis, and in connection with the Sluder operation on the tonsil.

The book is illustrated and is a dependable guide in the treatment of the diseases under consideration.

Published by the C. V. Mosby Company, St. Louis, 1919.

A MANUAL OF GYNECOLOGY.

By John Cooke Hirst, M. D., Associate in Obstetrics, University of Pennsylva-

nia; Obstetrician and Gynecologist, the Philadelphia General Hospital; Obstetrician to the St. Agnes Hospital; Gynecologist to Mt. Sinai Hospital; Gynecologist to the American Hospital for Diseases of the Stomach; Fellow of the College of Physicians, Philadelphia. With 175 illustrations. Philadelphia and London. W. B. Saunders Company, 1918. Cloth. $3 net.

This condensation of medical learning in book form well deserves the designation of manual. The author is a past master in conciseness and thoroughness. The book must be read to appreciate all the good points and profit by the information to be gained.

MILITARY HYGIENE AND SANITATION.

By FRANK R. KEEFER, M. D.

Colonel Medical Corps, United States Army; formerly Professor of Military Hygiene, United States Military Academy, West Point.

Second edition. Reset. 12mo. of 340 pages. Illustrated. Philadelphia and London. W. B. Saunders Company, 1918. Cloth. $1.75 net.

Dr. Keefer has given in this book, originally designed and prepared for the use of cadets at the United States Military Academy at West Point, a text book which is almost invaluable for the use of organizations other than military. It presents in a concise and interesting way information for the avoidance and prevention of conditions known to be detrimental to the health and well being of those constituting camps organized for purposes other than military.

NEW-WORLD SCIENCE SERIES—PERSONAL HYGIENE AND HOME NURSING.

A practical text book for girls and women for home and school use by Louisa C. Lippett, R. N., Assistant Professor of Corrective Exercises, University of Wisconsin. A Head Reconstruction Aid in Physiotherapy, Medical Department of the United States Army. Formerly Instructor National School of Domestic Arts and Science and Instructor in the Training Schools of Garfield Memorial, Providence, Columbia and other hospitals.

This book is written from the stand point of personal observation and knowledge by one of long experience in nursing and teaching. She is the daughter of a physician and is now engaged in physical reconstruction work with the wounded in France. It gives directions for preventing the spreading of infection from cases of communicable diseases as well as caring for ones self and family in time of accident or sickness in the home.

New and Unofficial Remedies

Chloramine-T, Monsanto: A brand of Chloramine-T which complies with the New and Non-official Remedies standards. The properties, actions, uses and dosage are described in New and Non-official Remedies, 1918, p. 156. Monsanto Chemical Works, St. Louis, Mo.

Chlorinated Eucalyptol, Squibb: Eucalyptol chlorinated at room temperature. It is used as a solvent for dichloramine-T in the treatment of infected wounds, etc. The solution should preferably be made as required. E. R. Squibb and Sons, New York.

Arsaminol: A brand of arsphenamine which complies with the New and Non-official Remedies standards. Arsaminol is supplied in sealed tubes containing, respectively, 0.1 gm., 0.2 gm., 0.3 gm., 0.4 gm., 0.5 gm., and 0.6 gm. Takamine Laboratory Inc., New York (*Jour. A. M. A.*, Jan. 18, 1919, p. 193).

Digitan: A digitalis preparation said to contain digitoxin and digitalin in the form of tannates. It is standardized biologically. Digitan was first introduced as digipuratan and is made under the digipuratum patent by license of the United States Federal Trade Commission. The actions, uses and dosage of digitan is the same as those of digitalis. It is sold in the form of a powder and as digitan tablets 1½ grains. Merck and Co., New York.

Neoarsenobenzol (Dermatological Research Laboratories). A brand of neoarsphenamine complying with the New and Nonofficial Remedies standards. It is marketed in tubes containing, respectively, 0.1 gm., 0.3 gm., 0.45 gm., 0.6 gm. 0.75 gm., and 0.9 gm. Dermatological Research Laboratories, Philadelphia Polyclinic, Philadelphia (*Jour. A. M. A.*, Jan. 25, 1919, p. 275).

PROPAGANDA FOR REFORM

MISBRANDED NOSTRUMS.

The following "patent medicines" have been the subject of prosecution under the Federal Food and Drugs Act: Paine's Celery Compound, Botanic Blood Balm, Owen's Wonderful Sore Wash, Lafayette Cough Syrup, Gilbert's Gravel Root Compound, Strange's Rheumatic Remedy, Baur's Diamond Brand Bromides, S. B. Cough and Consumption Remedy, Gowan's Preparation, Urol, Boxenbaum Discovery, Tablets Creavita, Old Lady Fulten's Comforting Pills, C. C. C. (Crownall Elastic Capsules), Victor Injection, No. 19 Compound and No. 6 Compound, Hemogenas Pills, Restorative Tablets—Fountain of Health, Denn's Strong, Sure, Safe and Speedy Stomach, Liver, Kidney and Rheumatism Remedy; Dr. Navaun's Mexican Lung Balm, Dr. Navaun's Kidney Tablets, Dr. Chas. DeGrath's Electric Oil, Bovinine, Fritch's Vegetable Liniment, Perkin's National Herbs Blood Purifier, Kidney and Liver Regulator; Dr. Lemke's Golden Electric Liniment, Dr. Lemke's St. Johannie Drops, Mentholatum, Enteronol, Dr. Harter's Lung Balm, Dr. O. Phelps Brown's Herbal Ointment, Taylor's Horehound Balsam, Breeden's Rheumatic Cure, Sulphur Bitters, Dr. DeWitt's Electric Cure, Dr. DeWitt's Liver, Blood and Kidney Remedy; Payne's Sylak, Dr. Bell's Pine Tar Honey and Lung Germine. (*J. A. M. A.*, Jan. 4, 1919, p. 59.)

"ASPIRIN" A COMMON NAME

The claim of the Bayer Company to the exclusive right of applying the name "aspirin" to acetylsalicylic acid will be definitely set aside if the recommendation of the examiner of interferences of the United States patent office is upheld. The stand taken by the patent office is in line with the established principle that no one can have a monopoly in the name of anything. Since "aspirin" has become the common name for acetylsalicylic acid, no one firm can have an exclusive right to it. (*Jour. A. M. A.*, Jan. 11, 1919, p. 119.)

QUALITY OF MARKET SUPPLY OF PROCAINE.

The local anesthetic procaine (first introduced as novocaine by the Farbwerke vorm. Meister, Lucius and Bruening, Hoechst A. M., Germany) is now manufactured by the Abbott Laboratories, the H. A. Metz Laboratories and the Rector Chemical Company. The products of these three firms were accepted for New and Nonofficial Remedies after the A. M. A. Chemical Laboratory had reported specimens chemically satisfactory and the Cornell Pharmacologic Laboratory had determined that they were not unduly toxic.

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C. R. ENSLOW
J. E. RADER,
Assistant Editors
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THE SHORTCIRCUITING OF THE COLON AND REMOVAL OF THE SAME FOR THE TREATMENT OF INSANITY.

By F. H. Forman, Buckhannon, W. Va.

(Read at Annual Meeting, Martinsburg, October, 1918.)

The uterus, ovaries and tubes have been removed for the treatment of insanity, also the appendix, the gall bladder drained, the stomach operated on, also the rectum. Teeth have been extracted and tonsils removed, and so far as we can ascertain without positive results, and the statement has been made that there is no surgical operation for the cure of insanity. The medical man says there is no medical treatment that offers a cure. If there is no medical treatment, no surgical treatment, no social treatment, no psychological treatment, then there exists a hopeless condition indeed.

So far as the speaker can ascertain, the short circuiting and removal of the colon for insanity has not been tested out in the country. Therefore, I trust you will endeavor to retain an open mind on the subject until its merits are proven or disproven. We still hope that insanity is a toxic disease and that there is a treatment.

You all know the location of the colon. I wish to call your attention to three of its principal parts.

First: The Ilio-cecal valve; second, the ascending colon; third, the splenic flexure. Of the Ilio-cecal valve we make but little complaint, believing it fills its function well when in its normal condition. Second: The ascending colon, which seems badly located anatomically and causing an almost vertical up grade to the passage of its contents, sixteen hours out of the twenty-four when we are standing or sitting.

Third: The splenic flexure, which is higher than the hepatic flexure, and nearly as high as the entrance of the stomach, and forms a kink-valve or bend in the bowel causing still further delay of the contents of the colon.

Now add to these conditions a certain

amount of enteroptosis which exists in some cases, and there certainly will exist a cause for intestinal stasis and auto-intoxication.

THE FUNCTION OF THE COLON

The first or ascending colon, is an absorber of fluids, which fluids are carried through the portal circulation to the liver. The left half of the colon, especially its lower portion, has become through convenience an organ for the storage of the dried fecal matter.

We are taught that the lymphatics of the colon are limited in comparison to those of the small intestines, and Mayo says it is probable that the lymphatics are limited so that the septic colonic contents might be passed through the liver and the liver used as a purifying agent.

Now if there is more septic content being carried to the liver than the liver can purify, then a certain amount goes on in the circulation, and as the brain has a large blood supply and if that blood is heavily charged with toxines which the liver had failed to eliminate, then we might conjecture that these toxines acting on the brain and its nerves might produce insanity. As the colon is the source from which these toxines come, then by the shortcircuiting and removing of the colon you remove the cause.

We must be careful in the selection of our cases for this operation. This operation is not intended for the treatment of insanity, which may be due to defective development or acquired disease, such as syphilis, or mental decay or one that shows a bad family heredity. The operation is indicated only in the cases which plainly show temporary improvement after the thorough elimination of the contents of the colon by cathartics, and then lapse back when badly constipated. This test should be made several times and carefully watched.

At the Guy Hospital in London in 1914 Sir Arbuthnot Lane said he believed many cases of insanity came from intestinal stasis and the treatment was to shortcircuit and remove the colon. From this statement, I was induced to do this operation.

Patient, female, age 53. Had had the usual diseaseas of childhood. Mother of four children, youngest 18 years. She was adjudged insane three and one-half years ago and placed in the asylum at Weston, West Virginia, where she remained two and one-half years. On June 28, 1917, fifteen months ago, she was operated upon, the colon shortcircuited and removed. In three weeks she had recovered from the operation, and one month later was discharged from the asylum, and has been able to work and has had her right mind now for fifteen months. Her bowels have never failed to act from one to three times per day since the operation and are of normal consistency. She has a normal appetite, is well nourished and does the work for three in family.

TECHNIC

The usual preparation for abdominal operation. Thorough cleansing out of bowels with castor oil the day before operation and enemas the morning before operation. Ether by drop method preferred. As soon as patient is under anesthetic and in operating room, normal salt solution is started in each axilla and kept up during the operation or until three pints are run in each axilla.

Make long incision from ensiform appendix or sternum to the pubes. Next have nurse introduce rectal tube and guide it up in sigmoid with hand in abdomen and leave it there, place two artery forceps (Oschner's are good) on

ilium near its termination, cut between with cautery, sew across end next to caecum and invert and put in a few more stitches to close it securely. Tie off a short bit of the messentery and make an end to side anastomosis of the ilium to the sigmoid, placing two rows of stitches and sew carefully and well. Have nurse pull out rectal tube a little and then guide it up in the ilium 6 or 8 inches with hand in abdomen. Have nurse to place a stitch at anus to hold the tube in place. Stand on left side of patient if you are right handed and tie off messentery of colon with sterile black linen thread, tie well and carefully so as to have no hemorrhage, and it is well to have an electric light held so it will reflect the light through the messentery and you can see exactly where to tie it off one-half way around, change to right side of patient to finish. Gently separate the omentum from the transverse colon and tie any bleeding places, proceed tying messentery off on around to within three or four inches of the anastomosis, place two forceps on sigmoid, cut between with cautery, sew across end of bowel next to amostomosis and invert and carefully put in second row of stitches. Close abdomen.

AFTER TREATMENT

Liquid diet. Give one ounce pure Russian paraphine oil before each meal and at bedtime. Introduce six ounces paraphine oil up rectal tube, night and morning for five or six days. At end of that time remove rectal tube, and patient can sit up at end of ten days.

As a precaution, I wish to say I think it best for the beginner to do a two-stage operation, doing the anastomosis first and some weeks or months later remove the colon, which makes it a simple and easy operation.

Discussion opened by Dr. F. L. Hupp, Wheeling.

I wish to personally thank Dr. Forman for bringing this interesting case to our notice, and congratulate him for his close observation and faithful emulation of Lane's work. I had the privilege in 1913 of following the work of this master of our art in his London Hospitals, and I was convinced after following his cases in Guys Hospital, that he was, and is, twenty years ahead of his time.

He has taught that normally putrefaction never takes place in the small bowel, but passage of the food mass may be delayed as a result of obstruction, when decomposition occurs and toxic absorption follows. Gradually this process involves a larger portion of the ilium and jejunum and the duodenum, great bowel and stomach all suffer.

The duodenum is found markedly distended, the mucosa congested, there is bacterial invasion of the biliary and pancreatic ducts and a long catalog of symptoms, even cancer, tuberculosis and insanity.

Surgical treatment is indicated only where medical means fail.

Some of the medical means we have used are familiar to you and they include: Diet, agar-agar, liquid petroleum (free from lighter hydro-carbons and poly-sulphides), reduced protein intake, bacillus bulgaris, laxatives, exercise, hygiene, suitable belts or corsets.

Only five per cent of all these stasis cases should come to operation.

Oschner suggested a method with great satisfaction. He severed the ileum eight inches from its entrance into the cecum —implanted the proximal end into the side of the lower end of the sigmoid and brought out the distal end of the ileum through a small McBurney incision directly in front of the cecum.

Through this the colon is flushed daily. This prevented absolutely the accumulation of feces in the colon.

Intermittent intestinal obstruction—and intestinal stasis may be due to kinks and bands and membranes either congenital non-inflammatory in type or pathologic and can be often relieved by operation and the stasis with its grave end results relieved without the serious and radical colectomy.

I have preached in this society for many years against the popular heresy known as chronic appendicitis, and have demonstrated it so often in the living pathology that I am more than ever convinced that many abdomens are opened for so-called chronic appendicitis in which the appendix has never been previously inflamed.

Jacksonian membranes, Jenesco's folds and bands, Lane's kinks, a sagging colon and ptosis of other organs, peritoneal adhesions, prolapsed transverse colon, incompetent ileo-cecal valve, all aggravated by 101 neuroses, psyconeurotic states and relaxation of the pelvic outlet —all must be relieved by the conscientious surgeon at the time the abdomen is opened to remove the innocent and possibly sclerosed appendix before he has decided definitely on so serious an operation as colectomy.

I would like also to emphasize the imperative necessity, and shall I say obligation of the surgeon, to study faithfully every such case—with every modern laboratory method and the diagnostic X-ray and with the cooperation of the internist.

PSYCHIC TREATMENT IN TUBERCULOSIS.

By
E. E. CLOVIS, M. D., Terra Alta, W. Va.

(Read at Annual Meeting, Martinsburg, October, 1918.)

Since the history of medicine, therapeutics has, to a great extent, been a matter of mystery to the lay mind. While scientific medicine has made great advances, the specifics for the treatment of diseases are very few and many supposed specifics of yesterday are thrown into discard today. This has been doubly true in therapeutics of pulmonary tuberculosis.

In the memory of most of us we have heralded a new cure for tuberculosis. We have all used creosote and, with great faith in the curative value, have done great harm to our patient. Then came the milk and egg era and later the hydrochloric acid specific. Many other drugs have been given with the best of intentions by the physician and taken by the spoonful by the patient with a great deal of faith; depending to a great extent upon the patient's idea of the physician's ability. I do not mean that I am a therapeutic nihilist in the treatment of pulmonary tuberculosis; far from it, as many drugs aid materially in the arrest of this disease.

Since we have no specific we must rely on other measures for the raising of the resistance in the body cells to overcome the infection. In order to succeed in the greatest number of cases we must bring to our assistance all the means that have been proven of value in the treatment of the disease; rest, fresh air, good food, etc. But in order to get the greatest amount of good from these we must have the complete co-operation of the patient's

mind. No patient will continue faithfully in any line of treatment unless he has hope that an ultimate good result will be obtained. Many physicians have the idea that all there is to the treatment of tuberculosis is to make the diagnosis and hand out to the patient advice sufficient to last him through his disability. In probably no other disease is the physician's sympathy, advice, correction, and the use of all the optimism he can give, so valuable.

In order to give these to their best advantage, the physician must know all the many peculiarities of his patient. If the patient be a stranger, he must spend some time in studying him. As is the case with many of our patients, we know them from childhood and at times know their parents; we even know whether or not they have any idosyncracies for any therapeutic treatment. We must first of all understand the human nature of the patient we expect to treat and then gain his confidence in our ability to treat him. To do this we must not be a doorstep diagnostician, but a thorough, painstaking one. A great deal will depend on our first examination and consultation; we should never examine a patient hurriedly. This may do very well to impress him with the fact that we are doing a rushing business, but will surely lessen his confidence in our ability to guide and treat him through such a serious illness as pulmonary tuberculosis.

The patient should be stripped to the waist and a thorough physical examination made; a laboratory test of sputum and urine and, if necessary, a tuberculin test may be made. At any rate, we must make our diagnosis positive and beyond doubt both to ourselves and to our patient. The patient should then be told that his illness is tuberculosis of the lungs; and we may counteract the shock, to a great extent, by stating that the disease is curable in a large per cent of early cases and life can be prolonged and made much more comfortable in practically all cases. I have never seen a case but that took the message as a matter of fact, and was at once willing to cooperate with me to their utmost in bringing about a cure of the process. During the treatment many relapses will surely occur as well as changes in the morale of the patient, and we should acquaint them with the cause of these relapses and buoy their hopes with a message of cheer.

We may well explain to them that the symptoms of tuberculosis are due to the toxemia which it produces and which has a detrimental effect on all the body tissue as well as the mind. We will find that a great many of our cases are typical neurasthenics and are really ideal cases for psychotherapy. In dealing with our patients we have all grades of mentality; the highly educated, the great common class and the ignorant. The higher the mentality the better the chance for a permanent cure—other things being equal—and the fool is absolutely an incurable case from the beginning.

We must also have confidence in the method we employ if we expect to convey our ideas and optimism to our patients and stimulate in them a spirit of co-operation and trust. Treatment carried out with the force of the physician's personality and confidence back of it, will have a much better result than a method carried out mechanically. In the treatment of many of the complications psychic treatment is of great value when used intelligently. I used to employ morphine very frequently in hemorrhages but seldom have any use for it now. How soothing and quieting are a few words of reassurance to the hemorrhage case. We should never treat these patients in a hurried and excited manner, but in practically all cases we can assure

our patient that he will soon recover from the recurrent loss of blood. Often a case that is almost hysterical from fright will become calm when we lay our hand gently on the head and assure them that they are not greatly in danger of death. And in our daily visits, which I think are essential in obtaining good results, we can always take good cheer, optimism, and a word of encouragement. If we note any improvement since our last visit we should mention it, as; your color is better, you are feeling better, your temperature is better, or, you are a brave fighter. Often a cheering word will turn a bad day into a good one and in this way raise the general body tone, increasing appetite, quieting the nerves, and producing better sleep and rest. It is a mistake to find fault with our nervous patients or make fun of them for the many peculiar ideas they may have, for they are not normal individuals but are abnormal on account of their disease. It is much better to compliment them on their efforts and let them know you have faith in them if you wish them to retain faith in you. With patients that cannot sleep we can often aid them greatly by allaying the fears that may be upsetting their minds and by encouraging them to relax and sleep for the good effect it will have on their disease.

We should teach our patients how to rest as we would teach a child. Rest is not at all understood by the majority of patients. One will think he is resting if he quits work; another if he is sitting in a chair talking and making all kinds of gestures; another if he is visiting in the country; still others, when they are reading. Any or all of these may use up too much energy for the particular patient. Patients should be taught to lie on the back with the body comfortable and to relax the mind as often as possible. They must be taught to not worry or keep their minds in an anxious state regarding matters of every day life; we must encourage in them a state of happiness, contentedness, and optimism and in this way relieve their nervous system of harmful stimulation which is increased or diminished greatly by their own attitude towards their affliction.

The one object with which I wish to impress you in this paper, is that we must treat our patients, not as cases merely, but as living, hoping, human beings—victims of the worst plague to which the human flesh is heir.

AMOUNT OF FOOD AND INTERVALS OF FEEDING IN INFANCY.

By
C. L. HOLLAND, M. D., Fairmont, W. Va.

(Read at Annual Meeting, Martinsburg, October, 1918.)

It is our purpose to deal only in a general way with some of the more important problems relative to the artificial feeling of infants.

Problems that have received but little attention from the profession at large, yet are from our viewpoint, matters of sufficient importance to merit the earnest consideration of all who have to do with the management of children in early life. Indeed we believe them to be the most important problems with which we have to deal in the management of babies that are not fed at the mother's breast.

Since the food and feeding has directly to do with nutrition, being also directly connected with the diseases of nutrition, so also the early nutrition may have its effects on the infant's after life, for by lowering its resistance to the various infections, allows such tremendous inroads to be made by these diseases among

the younger members of our population, thereby increasing enormously the mortality among children, as well as rendering many of those who survive handicapped throughout life.

Regarding the food needs of babies, we were accustomed for a long period to think only of the actual quantity, or bulk, of the food taken. Later we came to think of the percentage of the various food elements in the feeding mixture. Last, and by far least, have we come to take note of the caloric or food value, of the mixture, with reference to the child's actual body needs.

While urging the importance of attention to these matters, I am fully aware of their limitations. First; that the child is not a problem in mathematics; second, that children differ greatly in their powers of digestion and assimilation as well as in the rapidity of their growth; third, that the state of nutrition is a factor to be considered; fourth, that the digestibility of a given food mixture depends upon its being suited to the digestive capacity of the individual baby; fifth, that the utilization of a given food element may depend largely upon the composition of the food as a whole, and finally, there is not as yet an entire agreement among the different authorities as to the exact energy and protein needs of the human machinery as it exists in infants. We may, however, save ourselves from ridiculous blunders in this connection, and incidentally, the lives of many children entrusted to our care if we have an approximate appreciation of these requirements.

It is obvious that the age and weight of the child as well as the state of its nutrition has direct relation to its food requirements. By taking a large number of babies and noting the average amount of foods required to maintain proper nutrition and measuring this food in terms of calories per kilogram of body weight, certain workers in this field have been able to arrive at rather definite ideas regarding these matters and have set forth what they have been pleased to call an energy quotient. That is, the minimum calorie requirements for babies of a given age for a twenty-four hour period. A baby in the first six months of life is found to require a minimum of 110 to 120 calories, and during the second six months, 90 to 100 calories per kilogram of body weight.

The figures decrease gradually, but at the end of the second year stand as high as 75 to 80 calories per kilo. The food requirements relative to protein show less variation, remaining fairly constant throughout early life.

It is obvious that the human body, like a steam engine converts fuel fed to it into heat and energy, and that the amount of work done determines the amount of fuel required. Since the human engine may not at any time enjoy a period of complete rest, as the vital functions must be performed, there are certain minimal fuel requirements that must be met if its strength and integrity are to be maintained.

This human engine is unique in that it has the power of utilizing its own substance for fuel, in the absence of other supply, up to the point of exhaustion and death from starvation. Protein being the substance from which the tissues are almost wholly builded an adequate supply is of vital importance at all times. With reference to the amount of protein required, it has been estimated that a child requires at least 140 to 200 grams of protein per kilogram of body weight every twenty-four hours, or figuring the quantity in a different way, it has been found that about seven per cent of the calorie value of the food should be furnished by protein.

Take for example, a child of three months, weighing eleven pounds, or five kilograms. His caloric needs, taken as 100 calories per kilo, would be 500 calories. Seven per cent of this, or 35 calories, should be derived from protein. The caloric value of a gram of protein being 4.1 calories, it is found that to furnish this 35 calories will require about 8.5 grams of protein.

With reference to the food value of a feeding mixture, let us take for example, a child six months old, weighing 16 pounds, or 7.25 kilograms. His food needs reckoned at 100 calories per kilo., would be about 725 calories. Leaving aside the cream and skimmed milk mixtures, the mixtures in which whey is utilized or the mixtures containing precipitated casein, or other complicated food formulas—take a simple dilution of whole milk, which is the easiest and simplest form of milk modification and the one most commonly used—let us suppose that he is given six feedings of eight ounces each of a one-half whole-milk dilution as is frequently done, he would be getting only about 500 calories, which is considerably less than is required. If, however, 5 per cent of sugar be added to this mixture, thus increasing its value about 275 calories, or a total of 775 calories, the child would would be getting about his caloric needs. Pursuing the subject further, let us suppose that this baby, being fed on a percentage basis, were six feedings of eight ounces each, or forty-eight ounces every twenty-four hours, of a mixture containing four per cent fat, seven per cent carbohydrates, and two per cent proteids. The food value of this mixture would be about 1048 calories, or enough food for a child of twenty pounds. Such an excess of food long continued, may, by overtaxing the digestive powers, readily lead to a digestive disturbance. If, however, the child be fed only six ounces of the above mixture, or twenty-six ounces, in the twenty-four hours, he will get only about 780 calories, about the proper amount. Finally, suppose that the baby develops a digestive disturbance which, upon clinical evidence or microscopic examination of the stools is determined to be due to an excess of fat and the milk in the mixture be skimmed, thereby losing 3.50 per cent of fat, or 342 calories, the child would then be getting only about 444 calories, which is much less than his bodily needs. While it may be, and often is necessary to feed a child a mixture low in fat to tide him over a digestive disturbance, it is a mistake to leave him permanently on these fat poor mixtures as is so often done. The strength of the food should be gradually increased by the addition of small pecentages of fat as the capacity for its assimilation increases until the food has the necessary caloric value.

The length of the feeding intervals, in infancy, is a matter of prime importance since the failure of a food to agree may be due to too frequent feeding or an irregularity of the feeding time.

The duration of gastric digestion and the length of time food remains in the stomach was, at first, studied with the stomach tube alone. More recently this has been supplemented and later subordinated by studies with the Roentgen Ray.

It can be said, in general, from the observations thereby made, that the stomach of the breast-fed baby will be found empty in from one to one and a half hours after feeding. In the artificially fed the process is not completed under three hours. By some it has been placed higher than this. Of course the degree of dilution or concentration of the food has a direct bearing on the subject. A more diluted milk being more readily managed than a more concentrated one.

Also a food low in fats is more readily disposed of than one having a high fat percentage.

Having the above facts in mind it would be illogical to again fill the stomach with fresh food before a sufficient time has elapsed for it to empty itself of the previous feeding, and opportunity allowed for the secretion of the alkaline mucous, a sort of completion of its toilet and a short period of rest, before the next digestive effort. Moreover, the placing of a fresh food mixture in the stomach before the viscus is empty, allows the last feeding to coagulate about the periphery of the food mas or curd already present in the organ and favors its retention in an undigested state for hours, while in its center is a nucleus with all the conditions favorable for the growth of bacteria and the formation of fatty acids, to proceed unhampered, until the gastric content has become toxic. These toxins in their turn may, and often do, give rise to the various clinical manifestations and pathological changes with which we are all familiar.

POST-OPERATIVE TREATMENT.

By C. M. RAMAGE, Fairmont, W. Va.

(Read at Annual Meeting, Martinsburg, October, 1918.)

In choosing this subject, I do not mean to suggest a routine to be followed in the after-treatment of craniotomies, celiotomies, herniotomies. I desire to present the idea of devitalized tissues, whether from trauma, suspended metabolism, toxins or anemia; and what should be our therapeutic reasoning, and why. I desire for the moment to have an operation considered as an entity of cellular science rather than one of organular mechanics.

All that I shall have to say reverts to the principle of osmosis, diffusion or dialysis, by which we mean the tendency that miscible fluids or gases have to mix even through membranes which seem to be impermeable; and that this tendency includes molecules in solution in these fluids.

Further, I wish to define local inflammation as essentially vasodilation. The heat is an increased blood supply and an obstruction of the local heat eliminating apparatus due to the pressure of the vasodilation. The swelling is vasodilation; the redness is vasodilation, the pain is vasodilation due to pressure on nerve endings and pressure interference with the nutrition of the nerve ending.

I once heard an argument between Dr. William Welch, Dr. William Halstead and Dr. William Howell, all of Baltimore, in which the pathologist and the physiologist took issue with the surgeon, saying that anatomy and physiology, histology and pathology should be the last studies taken by the medical student before graduation; that, in fact, the fourth and third years in the wards should come first and after the student had familiarized himself with the clinical side of medicine and surgery he should complete his knowledge by an elementary analysis of it in the physiological and pathological laboratories.

There is a strong element of excellence in this argument. I think the good surgeon often feels that it would be ideal to spend six months again in the microscopical study of tissues; for all disease and injury is cellular; and unless we think in terms of cells, our work may be mechanically good but not scientifically excellent.

Why do wounds of the intestine heal so readily? Why in the sloughing of typhoid ulcers does not the colon bacillus enter the large exposed areas and immediately cause a terrific septicemia? The answer to the last question may seem to

be that there is an extra antibody formation at this time which prevents these ulcer bases being used as portals of entry; but if there is an extra antibody formation at this time why does it not prevent the formation of boils in other parts of the body as is common after typhoid My answer to both questions is, that there is a tremendous interchange of fluids among the lacteals, lymphatics and capillaries of the intestine, greater than in any other part of the anatomy, which brings to any given part of the intestine a relatively greater amount of antibodies even at a time of lowered antibody formation, so that even in the condition of lowered resistance of typhoid, secondary infection of the intestinal ulcers is not of serious moment.

Again, we repeatedly see, in exploring gunshot wounds of the abdomen how expertly and tenaciously and speedily the omentum searches out the punctures and embraces them, to aid, not in plugging them; but to bring an increased, osmotically acting circulation.

All the processes of life, in the final analysis, depend on the passage of substances in solution through a series of walls; and death is a cessation of these passages. The first passage is through the cell wall in the intestine of food substance; thence very speedily through the cell wall again into a lacteal or lymphatic; thence almost immediately, if it be carbohydrate, slower if it be proteid fat, into a venous capillary. A devious course of passages through walls of cells and vessels in the liver follows. A lightning like passage through another series in the lungs when it finally becomes ready for its assistance to the surgeon. Just as you all will admit that a reversal of this osmotic process in its first stage is secured in the bowel by the administration of a strong concentration of magnesium sulphate, I desire to dwell upon the fact that the last stage of passage of a molecule of food, healing substance or a drop of serum loaded with antibodies for fighting infection is hindered or prevented by any substance which coagulates the outermost cells bordering on a focus of injury or disease or which coagulates the outermost capillaries arterial or lymphatic. This means that I am objecting to the indiscriminate use of bichloride of mercury solution, iodine, Dakins solution and all other coagulants in wounds.

The cells fight against death from trauma or disease may then be stated as being:

(1) A mobilization of resources,
  (a) Vasodilation,
    1. Arterioles,
    2. Capillaries,
      Venous,
      Arterial,
      Lymphatic.
(2) Leucocytosis.
(3) Fever.
(4) Antibody formation.

We are most interested in the results of the vasodilation, which results in the four classic symptoms of inflammation; the pain, heat, swelling and redness are simply an indication that the body has responded to the cells' appeal and has sent an abundance of repair materials. The successive stages of the reparative operation depends on the nature of the task. If it is a clean laparotomy wound there is no occasion for the use of the leucocytes present and they are sent home for the most part, leaving only a few to gather up the few tissue cells along the line of the clean incision. In an infected wound, however, they are called for in large numbers and a message is sent to the bone marrow to speed up production of these at once; but first and foremost in the ranks of the army of cellular repair is the serum loaded with antibodies, the natural antibodies of the body, and

also full of material for cell regeneration. Indeed, this preparation may be so generous that large blebs may appear just under the superficial layers of the skin due to the oversupply of serum, and in crushing injuries of the limbs, due to the destruction of the return canals for the blood. In my experience I have adopted the rule in severe crushing injuries of the limbs to anticipate this by always opening the smaller veins on the dorsum of the hand or foot to relieve the return load. It is surprising how it prevents the intense swelling and discoloration which appears in the leg following a comminuted fracture of the tibia.

When the cells have made this preparation, and they usually have by the time the surgeon arrives in an injury, or before his dressing after an operation, it is certainly the part of reason to endeavor to assist the further development of the healing process. For many years the first endeavor of the surgeon was to apply a soothing dressing, the color being the supreme symptom. Later years made the first duty appear to be to clean out the wound of all bacteria possible; and we have had myriad solutions offered for this purpose. I think I may be safe in saying that there is no solution known which will entirely disinfect a wound made by a blunt, crushing object. Is the surgeon justified for the sake of killing ninety-nine per cent of all the bacteria present, in killing also all the superficial cells, lymphatics and capillaries in the tissues next the wound, which agencies are the ones nature desires to be the first line of healing agents? Iodine in any form, bichloride, carbolic or Dakin's solution are all cellular coagulants. I visited hospitals for two months last fall, observing carefully the Dakin experiments. I found an occasional infected smooth laceration which were sterile and sutured with a healing like per primum; but I have secured the same result three times in infected knife wounds and barbed wire wounds, using normal salt solution by the Dakin method. I have never achieved this result in the crushed, ragged wounds received in the coal mines, even by the most careful and assiduous use of Dakins solution, but I have secured it twice by using normal saline, both cases being compound comminuted fractures of ankles sent in by competent physicians for amputation. I think the Dakin method, which is simply Murphy's enteroclysis used locally, is the most valuable of all the means I have ever met with in the treatment of infected wounds, or uninfected wounds. But with few exceptions the normal salt solution will give better results, and give them much quicker; because the first stages of repair when a coagulating solution is used on a wound is to slough off the added burden of debris the surgeon has made. A normal saline compress enables the most superficial cells to function properly and carry on osmotic action with the compress.

The normal saline enema, or normal saline enteroclysis, is the following out of this principle on a greatly enlarged scale, because of the enormously large area for osmotic action presented by the superficial capillaries and arterioles.

The normal saline bath as a post-operative procedure, or in any case of lowered cellular vitality indicated by depressed secretions justifies itself. Given as a tub bath it is much better than sweating in many cases, giving the same result with no depression and it need not be of higher temperature than ninety.

As a matter of fact, eliminating the tubercle bacillus, the leprs bacillus and the spirochete do we have any organisms sufficiently virulent to overcome the natural protective agencies of the body as long as drainage is good and as long as

these protective agencies are not interfered with? As for example the use of cauterized irrigants?

Having operated on a patient and made all possible provision against infection we must recognize that recovery depends on proper rest, nutrition, proper blood pressure and proper excretion, these four desirata being named in the order of their importance. Now what structures in the body are most vitally in need of rest and in what structures is fatigue most serious? Undoubtedly the muscles of the arterioles and capillaries and nerve cells which control them. Rest must not be viewed in gross but microscopically. We must think in cells, not organs. What is the resting stage of arteriol dilation? The full capillaries conduce to sleep. Remember that general dehydration of all cells is one of the first results of fever or metabolic disturbance. The dehydrated cells immediately drain the capillaries. Have you not seen the relaxation of nervous children following a successfully administered enema? In a rather large experience with badly burned cases I have placed my main dependence in enteroclysis. This being difficult in children the saline enema is given every two hours.

The blood pressure will respond quickly to the administration of normal saline. It is always better than strychnine or digitalis excepting in organic heart lesions with a broken compensation.

Normal saline is not nutrition; but it makes available the large amounts of nutrition stored up in the body excepting in the hopelessly emaciated. When a condition or general cellular dehydration exists due to vomiting, purging, or a long anesthesia the patients may present a pinched look with an almost Hippocratic facies; and the desire is to get strong, nourishing food into him. He probably has stored up a sufficient supply of gycogen in his liver to last him many days; but it is not available because there is not water to transport it either into the blood stream or to release it when it arrives at the part to be nourished. Normal saline remedies this condition.

Finally, excretion, which really means good kidney action, is entirely dependent on large quantities of water, more than can be furnished by way of the sensitive stomach. Saline.

Death, viewed microscopically or in gross, is a phenomenon very closely related to fatigue. Certainly, fatigue is an important and necessary stage in the progress of a cell toward death. Conversely, to assure the recovery of our patient, if we can avoid cellular fatigue we will evade death.

Does morphine relieve fatigue in cells? Experiments by Ranke as early as 1865 on fatigue showed that genuine relief from fatigue was secured by nerve tissue sedatives; but sedatives being used, it must be borne in mind that cell nouishment must be furnished and made available coincidently. In addition to normal saline as enteroclysis or intravenously or hypodermoclysis, which will counteract all the secretion inhibiting effect of the morphine used, it is a most excellent thing to use intravenous injections of hypertonic glucose solutions, 100 or 200 c.c. of a 20 per cent solution given very slowly, requiring thirty minutes for the injection is a sure method of nourishing each cell adequately for several hours.

In conclusion then, I desire to recapitulate by saying that all the healing processes, all resistance to infection, all extrusion of toxins is due entirely to an interchange of fluids from capillary to cell. This interchange in healing is simply a speeding up of a process which in acting constantly. It is best assisted by

bringing into close relation to the locality of healing dilation additional fluid, isotonic and isothermic and thus increase the area of osmosis. By this means we not only aid the circulation in eliminating excretions, but on the inward movement of theosmotic process we furnish additional water to the dehydrated cells, dehydrated by their own injured brothers.

TAKING CHANCES IN BLOOD TRANSFUSION.

Transfusion of blood or blood constituents has become a necessity in modern clinical practice. Its general utility is unfortunately still limited by a number of difficulties of technic and incompatabilities of blood that have not been satisfactorily mastered. None of our present methods—the syrings cannula, the paraffined tube and the citrated blood procedures—are absolutely free from all objectionable features, among which unanticipated hemolysis, agglutination of the corpuscles, and febrile reactions are included. Of the dangers due to incompatability we shall consider particularly those due to agglutination rather than those due to lysis.

In 1900, Landsteiner first suggested that human beings might be divided into groups according to whether or not the corpuscles of one were agglutinated by the serum of the other, or vice versa. His preliminary grouping into three classes was subsequently shown to be somewhat inaccurate, and numerous examinations made since that time have definitely shown that there are four groups. As long ago as 1907 Hektoen* said: "From the practical point of view, isoagglutination of human corpuscles is of immediate intereset in connection with the determination of the opsonic index and with transfusion of blood." It will be remembered that in 1906 Crile had successfully transfused blood from normal to diseased human beings. Hektoen also said, in commenting on this achievement: "The occurrence of isoagglutinins in human blood suggests that under special conditions homologous transfusion might prove dangerous by leading to erythrocytic agglutination within the vessels of the subject transfused." Since 1906, transfusion has been performed on such a multitude of persons in such a great variety of diseased conditions that there is good evidence to show the necessity for again repeating the warning of Hektoen to the effect that the presence of these isoagglutinins in human blood may be a danger during transfusion. Cases of transfusion in human beings with seemingly unfavorable results due to cross-agglutination were reported by Schultz (1910), Hopkins (1910) and Ottenberg (1911).

The subject has been somewhat complicated by the introduction of the citrate method of transfusion, whereby the agglutination of the blood during transfusion is prevented by the addition of a small quantity of sodium citrate. This method of transfusion, being relatively easy, has become quite a vogue, and has led many observers to believe that preliminary tests of the compatibility of donors' and recipients' blood are unnecessary. This appears to have been the case, especially with some of those who utilized the transfusion of convalescents' blood as a means of treatment during the recent epidemic of respiratory diseases. Recently Pemberton has reported on 1,036 blood transfusions, and he further emphasizes the need of preliminary tests.† This large series of transfusions was made in the Mayo Clinic between 1915 and 1918, thirty-five of them by direct methods and 1,001 by the citrate method. Pemberton is convinced of the importance of preliminary tests before

transfusion. He points out that Bernheim in 1915 collected data of 800 transfusions by twelve different operators, and reported hemolysis in fifteen cases with four deaths. In twelve cases in the series of transfusions in the Mayo Clinic there were group reactions. In every case in which the blood had been grouped by the microscopic test, the observers were able to locate later the error in the test, most of them due to clerical errors in recording the group of the donor or the recipient. He describes a typical reaction, such as occurs when transfusion is done between persons of incompatible groups:

They occur early after the introduction of 50 or 100 c.c. of blood; the patient first complaining of tingling pains shooting over the body, a fullness in the head and an oppressive feeling about the precordium, and, later, an excruciating pain localized in the lumbar region. Slowly but perceptibly the face becomes suffused, a dark red to a cyantoic hue; respirations become somewhat labored, and the pulse rate, at first slow, sometimes suddenly drops as many as 20 to 30 beats a minute. The patient may lose consciousness for a few minutes. In one half of our cases an urticarial eruption, generalized over the body, or limited to the face, appeared along with these symptoms. Later the pulse may become very rapid and thready; the skin becomes cold and clammy, and the patient's condition is indeed grave. In from fifteen minutes to an hour a chill occurs, followed by high fever, a temperature of 103 to 105 degrees, in which the patient may become delirious. Jaundice may appear later. The macroscopic appearance of hemoglobinuria is almost constant. In three such instances the symptoms were not recognized at the time of transfusion, and 500 c.c. of blood was injected. All the patients died, two in one and three hours respectively, following the transfusion, and one became comatose shortly afterward and died thirty hours later. In the other nine instances the symptoms were early recognized and interpreted and the transfusion was concluded after the injection of 50 to 100 c.c. of blood. Adrenalin (epinephrin) and atropin were administered with good effect. There was no mortality in this group.

He concludes that these cases "point out most strikingly the fact that the injection of incompatible blood, namely, in which the donor's cells are agglutinable by the serum of the patient, is attended by the development of symptoms of the gravest nature, and that if these are not early recognized and the transfusion concluded before the injection of a large quantity of blood, fatal results are to be expected."

In the case of citrate transfusions, certain special untoward factors concerned have been made the subject of study in man by Drinker and Brittingham‡ at the Harvard Medical School laboratories. They have failed to observe any constant relation between the method of citration or the purity of the citrate used and the number of reactions. The objectionable component resides in the cells of the blood; for citrated plasma, thoroughly freed from all formed elements by prolonged high speed certifugalization or by porcelain filtration, is singularly nontoxic, contrasting markedly with serum in this regard. On the other hand, the washed whole cell content of blood is uniformly toxic, whether injected into the individual from which the cells have been removed (plasmapheresis) or into different individuals who have been tested and show no agglutination or hemolysis of red cells.

A further analysis of the location of the factors in the cells responsible for the difficulties indicates that reactions

decrease as the platelets are removed from the transfusion mixture. The Harvard investigators report that salt solution, red cells, white cells in greatly reduced numbers, and absence of platelets make the most perfect blood for transfusion that they have observed. Apparently changes in the platelets as a part of the process of coagulation represent a transformation responsible for the appearance of toxicity. The leukocytes themselves seem to be devoid of incompatibilities. Finally, they seem to have shown that citration harms the red cells, thereby promoting the possibility of hemolysis in otherwise compatible bloods. They found 44 per cent of reactions with citrated blood, as compared with 20 per cent of reactions when uncitrated blood transfusions were performed. They state that 20 per cent is a decidedly lower percentage of reactions than has been obtained with any other method.

Contrasted with their small series, however, is that of Pemberton, who found only 219, or 21 per cent of reactions in the 1,036 cases which he analyzes. Lewisohn¶ has also recently reported 200 cases, and is convinced that the frequency of chills is about the same with the citrate as with other methods. He, too, found reactions in 20 per cent of his cases.

Thus, one by one, the detrimental factors in transfusion are being recognized. The next steps consist in devising ways to avert or eliminate them and thereby make a frequently desirable performance more dependable and less threatening.—*Jour. A. M. A.*, March 15, 1919.

* Hektoen, Ludvig: Isoagglutination of Human Corpuscles, J. A. M. A. 48: 1739 (May 25) 1907.

† Pemberton, J. de J.: Blood Transfusion, Surg., Gynec. & Obst. 28: 262 (March) 1919.

‡ Drinker, C. K., and Brittingham, H. H.: The Cause of the Reactions Following Transfusion of Citrated Blood, Arch. Int. Med. 23: 133 (Feb.) 1919.

¶ Lewisohn: Am. J. H. Sc. 157: 253, 1919.

ANNOUNCEMENTS AND COMMUNICATIONS

February 28, 1919.

Editor W. Va. Med. Jour.,
Huntington, W. Va.

Dear Sir:—

At the last meeting of the Public Health Council held January 8, "influenza" was added to the list of reportable diseases.

It was brought to the attention of the Council that several licensed physicians of the state had recently been convicted of violation of the Harrison Act. Thereupon it was resolved:

"That the Council shall hereafter consider a conviction for a violation of the Harrison Act as a sufficient cause for revoking the license to practice medicine."

The following regulations with reference to bakeries were adopted:

"No person having a contagious or infectious disease shall be employed in any bakery in the state. All employees of bakeries engaged in the preparation, baking or handling of its unwrapped products shall wear clean, washable clothing and keep their hands and persons scrupulously clean.

"No bakery shall be located in the cellar or basement, and all rooms occupied by bakeries shall be of sanitary construction and provided with proper means for the exclusion of flies, other insects, and rodents.

"All bread before marketing shall be wrapped in clean paper, and all storage compartments in the bakery and delivery wagons shall be so constructed as to exclude dust and insects and shall be kept clean.

"All dough troughs shall be provided with suitable covers."

The next conference of Health Officers will be held at Hotel Chancellor, Park-

ersburg, April 23. It is quite probable that measures will be taken to secure the removal from office of those Health Officers who are persistently neglecting to attend these conferences as required by law. Recent amendments to the health law just adopted by the legislature give to the Health Council such authority. The law has been amended in several important particulars which should be of interest to the profession.

Two new divisions have been added to the State Department of Health, namely, Division of Vital Statistics and Division of Public Health Education and Child Welfare. All incorporated towns are required to nominate suitable persons for Health Officers "whose term of office shall begin July 1, 1919, and continue for a period of two years, unless sooner removed by the said municipality or by the Public Health Council. Should the Public Health Council fail to confirm the nomination of the person recommended as county or municipal health officer, or should the Public Health Council or other municipal or county authority remove any such officer, another nomination shall be at once made to the Public Health Council." The new law also provides that every practicing physician shall "report to the municipal Health Officer, where there is such official, immediately on diagnosis, every case of contagious or infectious disease that shall arise or come under his treatment within the municipality, and to the County Health Officer cases occurring outside the municipality. The Health Officer receiving such reports shall make to the State Department a weekly report of all such cases, stating the number of each kind of disease reported, the action taken to arrest the infection, and the result." The new law provides that any county court or municipal council shall have authority to provide for a full-time Health Officer and the expenses of his administration, and to lay a levy of not exceeding three cents on a hundred dollars valuation for the support of such administration.

The last provision of the new amendment makes it mandatory on all authorities of cities and towns, and persons or corporations about to have systems of water supply, drainage or sewerage, to consult with the State Health Department, and says:

"No city, town, or village, and no person, firm, or corporation shall establish any system of drainage, sewerage, or water supply system until the same shall have been approved in writing by the State Health Commissioner; and any municipality, person, firm or corporation which shall violate the requirements of this section shall be deemed guilty of a misdemeanor, and upon conviction thereof be fined not less than one hundred dollars nor more than five hundred dollars."

The purpose of this provision is to prevent the construction of sewerage systems or water supplies that shall be so defective in location or construction as to violate the principles of sanitation and endanger the public health. There are three trained sanitary engineers in the State Health Department who, under the provisions of this act, shall render free service to all who may need it.

The following very important bill was also enacted:

A BILL relating to advertisements of certain remedies.

Be it enacted by the Legislature of West Virginia:

Section 1. Whosoever publishes, delivers or distributes or causes to be published, delivered or distributed in any manner whatsoever in the State of West Virginia, an advertisement concerning

a venereal disease, lost manhood, lost vitality, impotency, sexual weakness, seminal emissions, varicocele, self-abuse or excessive sexual indulgence and calling attention to a medicine, article or preparation that may be used therefor, or to a person or persons from whom or an office or place at which information, treatment or advice relating to such disease, infirmity, habit or condition may be obtained, is guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than one hundred dollars, nor more than three hundred dollars, or imprisonment in the county jail not to exceed six months, or both in the discretion of the court.

Sec. 2. Nothing in this act shall be so construed as to prevent legitimate and legal public notices, placards, etc., issued under the direction of the State Health Department, or as to prevent sending out literature by either the State Department of Health or the United States Public Health Service.

Sec. 3. A justice of the peace shall have jurisdiction to try persons charged with the violation of this act.

Respectfully yours,
S. L. JEPSON,
State Health Commr.

The spirit of the late lamented ex-President must be pleased with the efforts of one West Virginia couple to prevent race suicide in this commonwealth.

We have recently received the following from one of our members, and would call the attention of our friend McElrath to it, that he explain the variations of sex in the three pairs of twins.

West Virginia Population Increasing Since July 7, 1916.

July 7, 1916, I delivered the mother of twin girls, one weighing nine and one-half pounds, the other eight and one-half pounds.

December 6, 1917, another pair of twins were born, one, a boy, weighing ten pounds, the other a girl, weighing seven and one-half pounds.

March 7, 1919, a third pair of twins were born. These were a ten-pound boy and a seven-pound girl. This last pair of twins made fourteen children for this mother. This is no "fish story," as the family lives at Bingham, Greenbrier County, four miles from Honeydew.

I will add that all are doing nicely.

Yours very truly,
H. C. MARTIN, M. D.,
Honeydew, W. Va.

TREATMENT OF PNEUMONIA FOLLOWING INFLUENZA.

New Bloomfield, Mo.,
Feb. 18, 1919.

To the Editor:—

Apply the vibratory current from an ordinary medical battery of two or three dry cells over or rather through each lung (the right then the left, respectively) for twenty to thirty minutes each in the following manner: Apply the positive pole below and the negative pole above on the right lung and vice versa on the left.

If your battery is working well, the rheotome should be humming a constant note like a string of a piano. Move the poles about over the chest wall as needed, being careful to keep one in front, the other behind, while the battery is in operation. The poles should be of sponge or metal plates and should always be wet with warm water when in use.

The cutting or stab-like pain that will be felt always indicates a focus of congestion; pneumonic centers may be found in this way that cannot be located by the stethoscope or the unaided ear.

I have tried this in several cases of pneumonia with influenza, some of the most hopeless cases that I have ever seen, and all, without exception, have recovered. So strong is my confidence in the efficacy of this treatment that I give it as my unqualified opinion that in the Middle West (perhaps anywhere) every case of pneumonia with influenza would recover if treated in this manner.

Any good electrical supply company should be able to supply batteries to those who are willing to try them.

Those who desire a more detailed explanation of the technic may send stamped envelope and I will do the best I can for them.

E. L. HUME, M. D.

The above is clipped from the *Journal of the Mo. Med. Soc.*

To alleviate human suffering and cure disease through the extension of its great system of hospital centers now twenty-six in number, in countries where groups of millions of people are without adequate medical attention, the Board of Foreign Missions of the Methodist Episcopal Church will spend $2,288,624 in building forty-five more hospitals and twenty-four dispensaries in oreign countries as a result of the Methodist Centenary Movement to raise $105,000,000 for world reconstruction.

This is an entirely separate venture from that of the forty-eight hospitals maintained by the Methodist Episcopal Church in America through which pass annually over 90,000 patients. The property value of these institutions, coupled with their endowments, is $15,626,343. In capacity they range from the Wesley Memorial Hospital in Chicago, caring for yearly, about 7,000 cases, down to the Sunnyside Methodist Sanitarium for tuberculosis at Silver City, N. M., accommodating seventy-five patients yearly.

The church has also just established a medical department to guard the health of its missionary workers.

Besides forty-five hospitals and twenty-four dispensaries, the board will erect other buildings and doctors' residences, the whole costing $1,513,930. It will draw into the service fifty-nine more missionary physicians and surgeons, thirty-two missionary nurses, and 166 native doctors, nurses and other medical assistants, the budget for staff and maintenance being $774,694. The total for both buildings and staff is $2,288,624.

In Mexico, where President Carranza has just given the Centenary plans his hearty approval, the board has at Guanajuato the only hospital in a population of 1,100,000. The nearest hospital is 200 miles away and the next nearest 400 miles distant. This work is to be strengthened.

The board will establish hospitals, nurses' training schools, and organizations of visiting nurses in the capital cities of five republics of South America. The state hospitals there are not adequate to care for ten per cent of the people.

A missionary doctor in Portugese East Africa is the only medical man for an area containing three and a half million people. Sometimes six o'clock in the morning finds fifty patients eagerly awaiting attention outside the little hospital. Another doctor and hospital in Rhodesia are equally popular among the blacks. It is proposed to increase the hospitals from two to six, each with missionary physicians and an adequate staff.

In China the board has eleven hospitals and two dispensaries, all overworked. When bandits scourge a district, they always spare the mission hospitals because of their reputation for healing the sick.

Care of wounds during the Chinese civil war raised the estimation of the foreign doctors in the eyes of the people still higher. It is proposed to improve the staff and facilities of existing institutions establish two additional hospitals and eleven dispensaries and, in association with other missions, man and equip medical schools for the training of Christian Chinese.

The Methodists will build a hospital for Mohammedans in Singapore, and erect nine hospitals on the various islands of Malaysia, the government bearing part of the cost. They already have a hospital in Java and a doctor in West Borneo.

In the Philippines a medical station will be established at Apparri, Luzon, which will minister to 250,000 people who are within four days' journey by boat from Manilla; while another station at Dagupan, the largest commercial center outside of Manilla, will have a field of a million people.

There are many other phases of Methodist medical work, such as a leper home and tuberculosis sanitarium in Africa, and three hospitals and a dispensary in India, which will be improved and developed.

Charleston, W. Va.,
March 11, 1919.

Dear Editor:—

The "Victory Liberty Loan!" Are you thinking of it? Are you telling your readers concerning it? To what extent are you going to aid in "putting it over?"

We recall with feeling of the highest appreciation the splendid service performed by the newspapers in all previous loan campaigns. Not a single one of the four loans could have gone over but for the generous aid given by the newspapers. It goes without saying that this—the fifth or "Victory Loan"—will be a failure without the hearty cooperation of the press.

Especially do the women of West Virginia appreciate the support of the newspapers in the former loans—when they raised 40 per cent of the Fourth Loan and 48 per cent of the Third Loan.

It will require more strenuous effort to accomplish the final loan than the previous ones. If we were yet actively engaged in the conflict, no one would doubt the success of the Fifth Liberty Loan. Who is there so lacking in patriotism that he would rather subscribe to keep the boys fighting and risking their lives than to pay the debt of gratitude and honor necessary to meet our obligations to our own fighting men, our own country and our allies and their countries. Forty-two and a half billions anticipated, are already spent. The rest is as imperative.

Not one of the four successful loans was more important than the forthcoming one. It is *an absolute necessity* and *must* go over. That the women of West Virginia will do their utmost to put it over is already evidenced—but we must have the concurrence of the press of the state to do it.

We feel assured that we will have your support. In asking it we pledge to be as reasonable as possible. From time to time, we will forward from this office such local matter as we feel will interest your readers. Believing that you will help to the full extent to carry the splendid work forward to glorious victory.

Sincerely yours,

MRS. GEO. POFFENBARGER,
Chairman Woman's Liberty Loan Committee of West Virginia.

Dear Doctor:—

I have just received word that the Harrison County Medical Society have

chosen the following arrangements committee:

Drs. H. E. Sloan, W. Gaston, R. A. Haynes, J. E. Wilson, J. F. Williams.

The dates set by this committee for the meeting are: May 20, 21 and 22.

Headquarters, the Waldo.

In writing, it might be well to address Dr. H. E. Sloan, Clarksburg, as I believe he is chairman of the committee.

With kindest regards, I am,

Fraternally,

J. HOWARD ANDERSON.

PUERPERAL RETROVERSIONS OF THE UTERUS.

By CARTER S. FLEMING, M. D., Fairmont, W. Va.

Fully thirty-six per cent of all gynecological patients have retro-displacements of the uterus. Of these, it may be estimated that twenty-five per cent occur in child-bearing women, the remainder being congenital and developing from other causes.

Our fundamental knowledge of uterine poise, normal and abnormal, has not reached its finality, but it stands to reason that if the uterus is anteverted before childbirth, and this is its normal position as far as we know, it should be after; if not, it should be returned to this position.

We know that after labor the uterus weighs several times its normal weight, yet it is expected to resume its normal anteverted position after labor, being held so by ligaments stretched and weakened. It is expected to remain there with the patient kept on her back, often for a protracted period, with abdominal binders and other things applied to add tone to the abdominal muscles.

When no attempts are made to prevent retroversions after labor, I believe that fully twenty-five per cent of women develop them. Even with the usual methods employed to prevent them, the figures will not fall much below this.

It must be remembered that soon after labor nearly all these retroversions are simple and uncomplicated, but that they, as a rule, are not discovered until infection has occurred with the formation of adhesions, and after glandular changes have taken place in the endometrium. This really places them in a class in which they do not truly belong.

When I became especially interested in obstetrics and gynecology several years ago, I made it a rule to examine every woman within eight weeks after labor. While they were in bed the usual methods were employed to prevent retroversions. I have always advocated much freedom for the woman after labor, getting her to a sitting posture reasonably soon after labor and out of bed as soon as possible. This, together with the knee chest position, was tried. Even so, a great many of these patients returned for their examination with retroversions. At that time, nearly all were corrected bimanually and kept so by properly fitting pessaries, exercise, posture, etc. Had they not returned for examination, or had they not been instructed to return, they would have later undergone one of the hundreds of operations for the correction of uterine retrodisplacements. Some did.

As my experience has grown and as my knowledge of the cause and prevention of these conditions has increased, I have gradually come to adopt the following technic in managing the puerperium:

MANAGEMENT OF THE PUERPERIUM WITH SPECIAL REFERENCE TO THE PREVENTION OF RETROVERSIONS OF THE UTERUS.

1. Birth canal injuries are repaired thoroughly and immediately, as neglect-

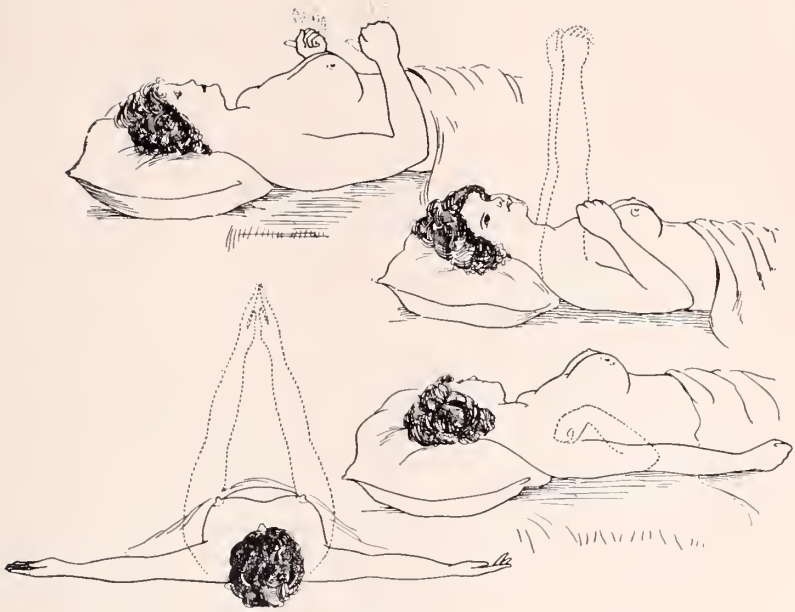

Figure 1
The patient takes these exercises practicing muscular resistance.

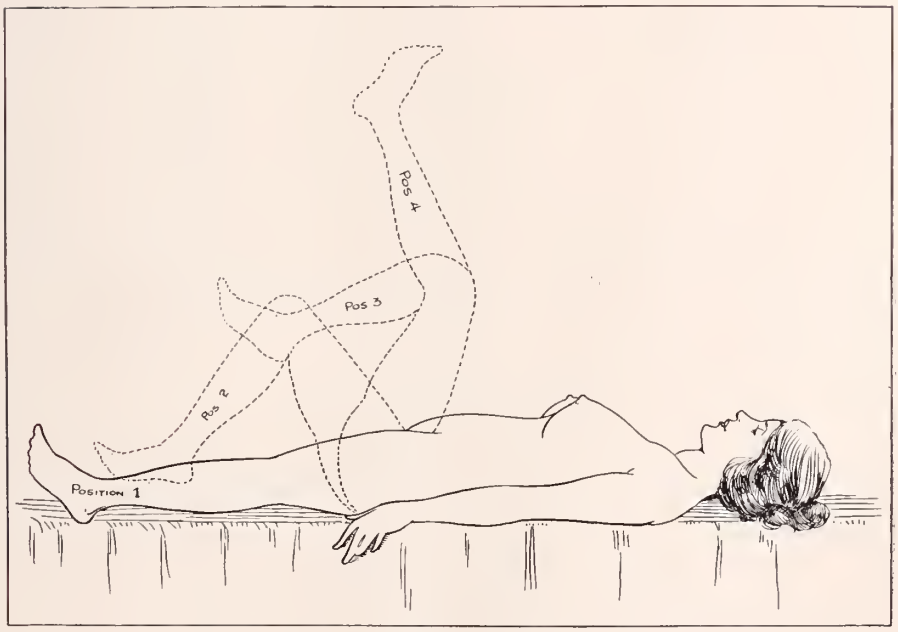

Figure 2
First passive; then active.

Figure 3
Kangaroo Walk.

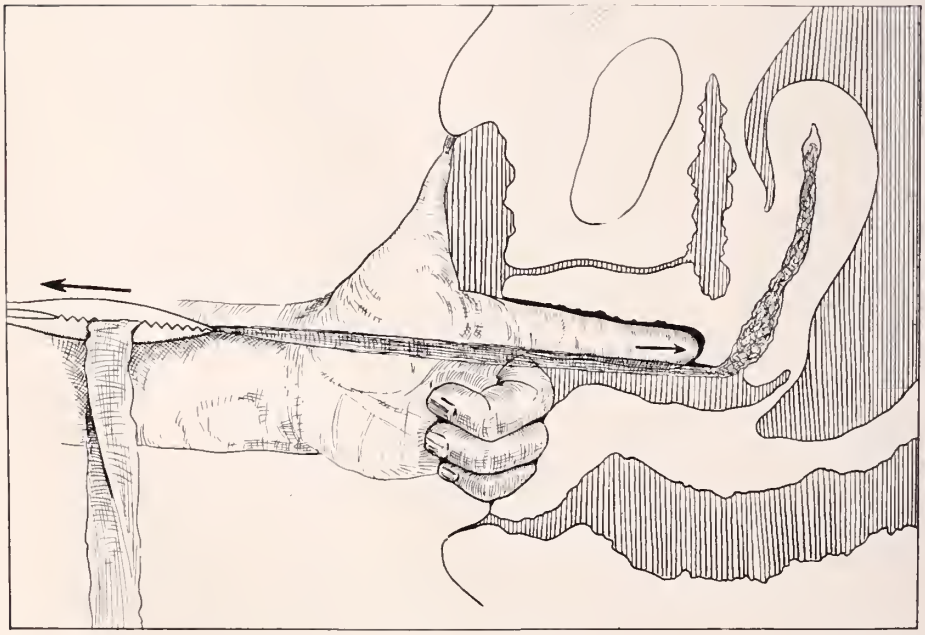

Figure 4
Showing proper method in removing gauze from uterus. One finger holds the cervix back and prevents the uterus from retroverting. The hand should be gloved.

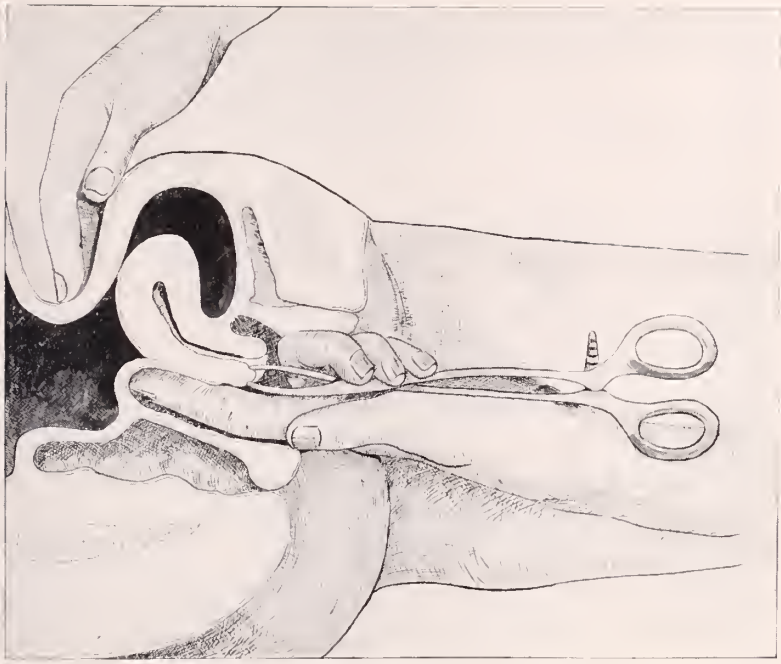

Figure 5

Figure 6

ed injuries play an important part in the etiology of retrodisplacements.

2. In all cases, excepting those shocked, the head of the bed is elevated within a few hours after labor. The patient is advised not to remain on her back for long at a time and to assume the abdominal prone position occasionally. Usually within seventy-two hours the bed is lowered and the patient is placed in a semi-upright position with pillows or a back rest. This favors drainage and hastens involution.

3. Beginning usually about the fourth day, systematic exercises are started. (Figures 1 and 2.) If there is a repaired laceration of the perineum, the second exercise is not used at this time. These add tone to the muscles and overcome the weakening effects of the stay in bed.

4. By the eighth or ninth day the patient sits out in a chair and twice daily is assisted to assume the knee chest position. On the tenth day she walks. On the eleventh day, the kangaroo walk is begun. This kangaroo walk (figure 3) was devised by Polak, of the Long Island College Hospital of Brooklyn. It is, in my opinion, the best single procedure with which to prevent puerperal retroversions. The patient, in the hospital, is clad in a suit similar to a sleeping garment; in the home the ordinary night dress and slippers suffice. She is instructed to walk on all fours with as little bending of the knees as possible. Air enters the vagina and distends this canal. The uterus rests upon the anterior abdominal wall inside, slightly above the symphysis pubis. The cervix is carried backward. There is a lateral motion to the pelvis and a lateral rocking of the uterus. As a result, involution is markedly stimulated and the tendency toward retroversions is greatly lessened. All of these exercises are to be continued for at least a month and the patient is advised to return at the end of that time for examination.

Beck (a) reports only ten per cent of retroversions following the use of the kangaroo walk alone. My own figures, based, of course, upon a lesser number of cases in which my technic was used, shows eight per cent.

Before adopting this technic, it was not uncommon for patients to return for their examination complaining of backache, a dragging sensation in the pelvis, constipation, headache, nervousness, etc. Examination in these cases showed the uterus to be retroverted or retroflexed. Since adopting the technic my patients arise early and are not weakened by their stay in bed. Especially is this true if their pain is lessened or abolished by the use of nitrous oxide analgesia during labor. Their muscle tonus is good, lactation is abundant from the beginning and involution is further advanced than it is ordinarily.

OTHER FACTORS CONCERNED IN THE CAUSATION OF RETROVERSIONS.

Another factor in the etiology of uterine retroversions, especially in multipara, is the failure of the operator to return the uterus to its normal position after curettage. In doing these operations the uterus is pulled down with an instrument on the cervix. This, especially in the case of an enlarged uterus, will retrovert it and in many cases it remains so, due to the failure of the operator to replace it. Another frequent retroversion is that caused by the removal of gauze from the uterus after it has been tamponed following curettage or labor. The usual method is to catch hold of the loose end lying in the vagina and to pull it out without paying any attention to the uterus. This important operation is

usually intrusted to the nurse, yet it is more important than the introduction of the gauze. Figure (4) shows the proper way to remove it.

CORRECTION OF UTERINE RETROVERSIONS.

Having properly diagnosed a retrodisplacement, the next step is to determine whether or not it is movable. The treatment will depend upon whether it is movable or adherent. When movable the first step is to replace it to its proper position. Bimanual manipulation is tried first. If the organ is well involuted, this method is usually successful. Usually, however, the uterus is subinvoluted and well down in the hollow of the sacrum. In this case, it is necessary to draw it down and down from under the promontory of the sacrum with a tenaculum on the cervix, at the same time attempting replace bimanually (Figure 5). In new cases this can be done. Quite often it is better to administer nitrous oxide to these patients as better relaxation can be secured. When it is not necessary to administer an anesthetic, the writer often performs this operation with the patient in the knee chest position.

When the uterus is markedly subinvoluted a baroglyceride tampon is inserted every third day and order a hot vaginal douche twice daily. It is important that the solution used be hot, 115 degrees Fahrenheit, and that the patient be placed in the proper position. In addition, the patient is instructed to do the kangaroo walk twice daily, increasing the distance walked each day. Two weeks of such treatment will produce sufficient involution in uncomplicated cases to make replacement easy. Often patients return with the uterus in anteversion, for which result I give credit to the kangaroo walk.

After the uterus is brought forward it is necessary to hold it there with a properly fitting pessary. For this I use a Smith-Hodge pessary. The vagina is measured and the proper size pessary selected. It is often necessary to soften it in hot water and to mould it to fit. Figure 6 shows the pessary in place, holding the uterus forward. Notice that the pessary does not push against the cervix but that it holds the uterus forward by stretching the posterior vaginal wall backward, thereby pulling the cervix back and the fundus forward. The patient is now allowed to walk about to see that the instrument causes no discomfort. She is told that its presence does not lessen her activities. She is told to take a vaginal douche occasionally for cleansing purposes, and to return in two weeks for an examination. The pessary is worn for at least three months, after which the uterus stays in anteversion or again retroverts. If it does retrovert, an operation is performed to hold it anteverted.

In the case of the patient with a persistent retrodisplacement, following labor, which is causing no marked symptoms, if she is likely to become pregnant soon again, this is awaited and careful steps taken to prevent a retroversion. In addition to the technic before described, the puerperium is arranged so that the supporting structures undergo a complete involution while the uterus is held in anteversion with a pessary, as advised by Reynolds. (B) This must be done with a strict asepsis and by one skilled in the fitting of pessaries. As the parts involute a different sized pessary must be used. This method is certainly worth trying, especially when the operation is not advisable or when it is objected to.

OPERATIVE TREATMENT OF UTERINE RETRODISPLACEMENTS

Concerning the operative treatment of uterine retrodisplacements, much has

been written. Hundreds of operations have been devised to cure these conditions. Just a word will be said here about the treatment of simple retrodisplacements.

When operation has been decided upon it is, in these cases, not difficult to select the operation. Crossens technic has been most used by the writer, and, if proper post-operative treatment is used, it serves well and causes no complications during subsequent confinements. Occasionally the Murphy or Gillman technic has been used. Following these operations I always introduce a pessary to be worn for a few weeks. This removes the strain from the round ligaments and holds the uterus anteverted until the structures have adapted themselves to their new positions. Failure to do this will result in many disappointments and re-operations.

SUMMARY.

1. Post-partum and post-abortal retroversions and very common abnormalities due to, in the majority of cases, faulty management on the part of the attendant. Attention to details is lacking.

2. The greater number of retroversions are preventable.

3. The technics described are most useful in preventing retroversions following labor, abortions and operations means to cure retrodisplacements.

(a) Beck, *American Journal of Obstetrics and Diseases of Women*, September, 1917.

(b) Reynolds, *Boston M. and S. Journal*, December, 1917.

SOCIETY PROCEEDINGS

The Little Kanawha and Ohio Valley Medical Society met at the Chancellor Hotel on Thursday evening, March 6, 1919. A banquet was held at 7:30 p. m., after which the society was called to order by the president, Dr. R. B. Miller.

The following members were present:

Drs. Wise, Jeffers, Barrows, Prunty, Starkey, Richardson, Gaynor, E. S. Goff, Douglas, Campbell, Stille, Frame, Casto, Muhleman, Albert, Price, Bush, T. L. Harris and Giltner.

In compliance with the statement of the State Secretary that this society is entitled to two delegates besides the secretary in place of only one as elected at the February meeting, Dr. E. S. Goff, Spencer, was elected delegate and Dr. S. W. Bush, Parkersburg, alternate.

It was moved and seconded that all previous members whether in good standing or not, who entered military service, should have their dues remitted until discharged. Carried.

The essayist of the evening, Dr. Chas. S. McDougal of Athens, Ohio, was then introduced and read a most excellent paper on "The Nervous System in Diagnosis, Prognosis and Treatment." This was fully discussed by the members and a vote of thanks was extended to Dr. McDougal by the society. There being no further business the society then adjourned.

H. A. GILTNER, *Secy.*

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., Editor
C. R. ENSLOW, M. D.
J. E. RADER, M. D. Assistant Editors

Huntington, W. Va., April, 1919

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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THE CLARKSBURG MEETING

We have many pleasant memories of the last meeting held in this city. At that time I was but a member of the State Association's kindergarten and it seemed very marvelous how men could possibly know so much as did the older men who had the papers and addresses. To confess the truth, I stand in awe of them yet. As the years passed many of them came to be my very good friends and advisers. As such they are dear to me Sometimes I wonder if their like is disappearing from among us. As I look back it seems to me I have been blessed by the kindly interest of the older men in the state body. Maybe it has been because of the fact that I have realized how much I had to learn from them. Be that as it may, I love them.

Many of the prominent ones will not be there next month to attend the meeting. Yet I am sure that the spirit of those who have been called to carry on their activities in a higher plane of existence, will gather with us in the Waldo just as in that year gone by. Yet still many of the faithful ones will come, and will find hospitality the first name of the

Harrison County fellows. Take notice this meeting was arranged for May 20, 21 and 22.

Let us each make all plans to be among those present. We will have to exert ourselves to make this meeting a bigger and better one than the last one in Clarksburg. Get busy and be sure to be there.

DEATHS OF PHYSICIANS IN 1918.

During 1918, the deaths of 2,616 physicians in the United States and Canada were noted in *The Journal A. M. A.* On an estimate of 155,000 physicians, this is equivalent to an annual death rate of 16.88 per thousand. For the sixteen previous years the mortality rates were: 1917, 14.37; 1916, 14.08; 1915, 15.71; 1914, 14.41; 1913, 14.64; 1912, 14.13; 1911, 15.32; 1910, 16.96; 1909, 16.26; 1908, 17.39; 1907, 16.01; 1906, 17.20; 1905, 16.36; 1904, 17.14; 1903, 13.73; and 1902, 14.74. The average annual mortality for the period from 1902 to 1918, inclusive, was, therefore, 15.61 per thousand.

AGES: Of the decedents, 174 were under 30; 455 between 31 and 40; 449 between 41 and 50; 474 between 51 and 60; 463 between 61 and 70; 358 between 71 and 80; 160 between 81 and 90, and 18 between 91 and 100.

CAUSES OF DEATH: There were 241 deaths assigned to general diseases; 261 to diseases of the nervous system; 331 to diseases of the circulatory system; 822 to diseases of the respiratory system; 98 to diseases of the digestive system; 134 to disease of the genito-urinary system; 318 to senility; 39 to suicide; 89 to accident; 15 to homicide, and 69 after surgical operations. Among the principal assigned causes of death are: Pneumonia-influenza, 428; pneumonia, 375; senility, 318; heart disease, 212; cerebral hemorrhage, 200; nephritis, 90; accident, 89; surgical operation, 69; malignant disease, 68; tuberculosis, 60; in battle, 53; suicide, 39; arteriosclerosis, 36; angina pectoris, 32; from disease overseas, 31; septicemia and diabetes, each 29; meningitis, 23; uremia, 22; appendicitis, 16; myocarditis, homicide, anemia, and dilation of the heart, each 15; cirrhosis of liver, 14; kidney disease (unclassified), 13; gastritis, 11, and many other diseases less than 10.

EPIDEMIC OR LETHARGIC ENCEPHALITIS

Acute Infectious Ophthalmoplegia, Acute Encephalitis, Nona?

This unfamiliar disease, many cases of which were observed in England and France early in 1918, and in Vienna in the winter of 1916-1917, when von Economo suggested the name "encephalitis lethargica," now seems to be making its appearance in various parts of this country. In the recent discussion on influenza before the Institute of Medicine of Chicago, Bassoe stated that during the last few weeks he had seen several cases which were characterized by marked drowsiness and paralysis of cranial nerves, especially the ocular, and which otherwise corresponded to the clinical picture observations by other physicians. Last week Pothier reported the clinical details of eight cases from Camp Lee, Va., and Neal mentions the occurrence of cases in New York.

In previous editorial discussions of the European, especially the English, reports on lethargic encephalitis, special emphasis was placed on its similarity to the cerebral and bulbar forms of epidemic poliomyelitis, and it was suggested that further investigations might show "the new disease" to be true epidemic poliomyelitis. In the meantime, the report of an extensive collective ingestigation of lethargic encephalitis (168 cases) has appeared from which we learn that, while

nothing by way of a causal agent has been demonstrated, intracerebral inoculations of monkeys with emulsions of diseased nervous tissue failed completely to produce any results. As the monkey is readily susceptible to such treatment with similar material from cases of epidemic poliomyelitis, the present indications are that the two diseases are separate and distinct, and this conclusion is borne out also by certain clinical and epidemiologic differences to which attention has been called by Netter in Paris, especially. It is noteworthy, however, that the anatomic changes in the two diseases are of the same general nature, and MacNalty ventures the suggestion that the relation between epidemic poliomyelitis and lethargic encephalitis may be comparable to that between typhoid and paratyphoid fevers. The English investigators consequently regard lethargic encephalitis as due to an as yet unknown virus which causes innflammatory changes, especially perivascular infiltrations, in the basal ganglions, the upper part of the pons, especially in the gray matter of the floor of the fourth ventricle, and in less degree elsewhere in the medulla. It is distinctly a poliencephalitic disease: the outstanding clinical features are a more or less pronounced lethargy, often progressive, and paralysis of the third and less often other cranial nerves. Ophthalmoplegia was observed in about 75 per cent of the English cases.

It is noteworthy that cases appear to occur with the general symptoms of fever, lethargy and weakness, but without paralysis, and hence are easily mistaken for more common infections, though perhaps of the greatest importance in the spread of the disease, which now is notifiable in England and Wales. At present, however, no new cases seem to be occurring in these countries. The results of further and more complete observations of lethargic encephalitis as it occurs in this country will we awaited with special interest.

It is quite remarkable that while English and other European observers do not seem to place any special stress on the relation of the newly recognized disease to influenza, the American cases so far reported are associated by the observers, particularly Bassoe and Neal, more or less directly with influenza. Four of Pothier's eight patents are said to have had influenza a few weeks before they came down with lathargic encephalitis. While the question thus raised cannot be answered at this time, the information we now have indicates that it is only in connection with epidemics of influenza that anything definitely resembling lethargic encephalitis is described in the older literature.

It is said that profound and prolonged sleep has been observed in connection with many epidemics of influenza since early times. Zuelzer mentions that in the epidemic of 1712, somnolent conditions were so frequent and so marked that in Tubingen, for instance, the disease was known as sleeping sickness, and Longuet gives a quotation from Camerarius which appears actually to describe ophthalmoplegia. Coming down to more recent times, we find that in the early nineties of the last century, at the time of the influenza outbreak of 1889-1891, quite a little was written about a since-forgotten disease called "nona" (also "la nonna"), which is said to have occurred especially in northern Italy and Hungary, but also elsewhere, and of which lethargy and weakness were pronounced manifestations. At about the same time cases of ophthalmoplegia with stupor and somnolence were described by Blanc, Mauthner and others, and the question was raised then whether "nona" was not a kind of ophthalmoplegia.

"Nona," however, failed to establish itself as a definite disease, and was soon forgotten completely.—*Jour A. M. A.*, March 15, 1919.

During February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Non-proprietary articles: Biologically reactive food proteins.

Merck & Co.: Tannin Albuminate Exsiccated—Merck.

E. R. Squibb & Sons: Cow's Milk Allergens—Squibb. Egg Allergens—Squibb. Wheat Allergens—Squibb.

Takamine Laboratory: Neoarsaminol, 0.15 gm. tubes; Neoarsaminol, 0.3 gm. tubes; Neoarsaminol, 0.45 gm. tubes; Neoarsaminol, 0.6 gm. tubes; Neoarsaminol, 0.75 gm. tubes; Neoarsaminol, 0.9 gm. tubes.

BACK NUMBERS AGAIN REQUESTED.

December, 1917; May, 1918; January, 1919; February, 1919.

STATE NEWS

Dr. R. W. Miller, who has been located at Martinsburg for some time, has moved to Hagerstown, Md.

Dr. E. M. Easley of Bluefield, has located at Alpoca.

Dr. William R. Laird, who has for several years been surgeon at the Sheltering Arms Hospital, Hansford, W. Va., is now connected with the Chesapeake & Ohio Hospital at Clifton Forge, Va.

Dr. Karl C. Prichard, of Huntington, Captain in the M. C., is now with the army of occupation in Coblenz, Germany. It is not known when he will return.

Born to Lieut. and Mrs. Ed. Rose at Hinton, a son. Lieut. Rose is in France, having gone across after the armistice was signed.

Dr. Oliver D. Barker of Parkersburg, who served eighteen months in the service, has been honorably discharged and has resumed his practice.

Members of the Wayne County Medical Society will dissolve their organization and join the Cabell County Association as individuals, it was decided after the Cabell County Association refused to consider the petition of the Wayne Society to merge the two associations. The petition of the Wayne doctors was presented by Dr. O. T. Hines.

Lieut. McVey Buckner, who has been in France the past eighteen months, has arrived from overseas and is at present at Camp Taylor.

Lieut. Buckner was attached to a medical detachment of the British army for over a year, but lately was transferred to an American unit.

Dr. Wm. F. Boyers of Fairmont, accompanied by his brother, Dr. C. F. Boyers, Jr., of Little Falls, Monongalia County, entered the Johns Hopkins University, February 24, for special work in general practice.

Dr. Ray Kessel of Ripley, of the M. C., is in France, where he has been in active service for over a year.

Dr. J. A. Tyree, of Page, has left the coal fields permanently and is now at Bellevue Hospital, New York City for some time.

John Irwin Warder, Weston, W. Va., University of Maryland, Baltimore, 1879,

aged 62, president of the Lewis County Medical Society, for three terms mayor of Weston, and once a member of the legislature from Lewis County, died at his home, February 9, from heart disease.

Dr. E. H. Campbell, formerly of Leewood, is now located at Carbon.

Dr. C. A. Willis, of Clarksburg, lieutenant in the M. C., has been honorably discharged from the service and has resumed his former practice.

Dr. M. L. Dillon, formerly of Welch, is now at Asheville, N. C.

Dr. R. J. Wilkinson, lieutenant in the M. C., who has been at Camp Lee, Va., has returned to Huntington and resumed his duties as chief surgeon at the C. & O. Hospital.

Dr. H. C. Martin, formerly of Rainelle, who has been in the east for some time, has located at Honeydew, W. Va., where he has taken over the practice of the Raim Lumber Company.

Dr. I. C. Hicks, after a sojourn of several weeks in the south, has returned to his practice in Huntington.

Capt. Oscar Biern of the M. C., has arrived on this side. Before the entrance of America into the war Capt. Biern was a medical officer in the British army. After the U. S. joined the allies he secured a transfer to the forces of his native country. He is a resident of Huntington.

Dr. J. W. Ruckman, formerly located at Rosby's Rock, is now at West Liberty.

Dr. W. H. Cunningham of Blue Jay, but at present a member of the West Virginia legislature, was a recent visitor in Huntington from Charleston.

MEDICINE

BACTERIOLOGY OF THE SPANISH INFLUENZA

The pandemic of influenza has not spared any single part of Germany. The clinical course does not seem to differ from that run by the disease in this country. Relapses and fatal pneumonias are particularly noted. The clinical picture is declared to be identical with that of the last pandemic of 1889. A very striking observation has been brought forward and generally confirmed at a special meeting of the Munich Medical Union on July 9—namely, that persons under 30 years of age mainly fall victims to the disease; this was explained by a survival immunity in the elder generation. The meeting considered all the aspects of the epidemic on the basis of the hospital and University material of Munich. Pfeiffer's bacillus has been found but exceptionally; streptococci, and occasionally pneumococci, were recovered from the sputum, organs, and also blood of the patients. Similar findings were recorded in 1889, and thus the present results were in "keeping with precedent." Pfeiffer's bacillus had not been found until 1892, although it should have been impossible to overlook it in 1889, thus it may be that it will yet turn up in due course. The editors of the *Deutsche medizinische Wochenschrift* have addressed a circular inquiry to all the leading bacteriologists in Germany requesting enlightenment as to the results of their laboratory investigation. Pfeiffer himself had reserved his final

opinion as to the relationship of the pandemic with those of 1889 and 1891-92. He had not examined a sufficient number of cases at Breslau, but found his bacillus in some, while failing to discover it from others, and was still investigating the causes of this discrepancy. Gruber answered from Munich very simply: "Influenza bacilli not found hitherto—investigations proceeding." Ulrich Friedmann, who is in charge of the infectious ward of the Virchow Hospitals of Berlin, expressed his belief that the symptomatology and complications of the epidemic correspond exactly with those described in 1889-1890. He had not found Pfeiffer's bacillus, streptococci and pneumococci being the most common agents of the complicating pneumonias. The influenza bacillus may be evading capture on account of faulty method of inquiry, yet on the other hand the possibility must be not overlooked that there may be epidemic diseases clinically resembling influenza of which Pfeiffer's bacillus is not the agent. Uhlenhuth has so far reported from Strassburg the same contradictory results as those of Pfeiffer. Kolle reported under the date of July 18 from Frankfort his failure to detect Pfeiffer's bacilli in any of the few cases which he had thoroughly examined. In practically all cases there were found, however, large numbers of a Grampositive coccus —often in a pure culture or in symbiosis with pneumococci. The diplococcus tended to develop involution forms and to grow in very long chains in the condensation water. He regards them as agents of a secondary infection in the "Spanish disease" which to his mind may not be identical with the pandemic influenza of 1889-1893. The finding of this pleomorph Gram-positive diplococcus is very interesting in view of the observations of Rosenow and his pupils in the United States.—*The Lancet,* August 10, 1918.

HOOKWORM

Hookworm disease has long been known in the mines of Wales, Germany, Netherlands, Belgium, France and Spain, and in the United States has been reported from mines in Nevada, North Carolina, Tennessee, Kentucky, West Virginia and California. Since no complete survey of the mining regions of the United States has been made, it is very probable that hookworm disease in mining regions have been carried on in a number of European countries. Germany reduced the infection in 30,000 miners in ten years from more than 30 per cent to less than 1 per cent. California is the only state in the United States which is carrying on an organized campaign against hookworm disease among miners.—C. A. Koford, in *Bulletin California State Board of Health.*

HOOKWORM DISEASE

An elaborate paper based on the work of the Rockefeller Foundation in the Malay Peninsula, Java and Fivi Archipelago, covering two and one-half years, is presented. The principal point is the comparative merits of oil of chenopodium and thymol in the treatment of the disease. Their methods of obtaining, counting and classifying the worms, and the relative efficiency of various drugs in expelling them and methods of preparation of the patients and administration of the treatment are given in considerable detail, and they find that oil of chenopodium is by far the most efficient. What they call the half maximum dose (0.5 c.c. three times, or 1.5 c.c.) of oil of chenopodium is the preferable routine treatment. It does not have the toxic effects of the full rose, and two treatments have the very satisfactory result of removing 99 per cent of the worms present. It has the additional advantage of more uniform action, and is less unpleasant to the taste

than thymol. Thymol has an advantage over this half dose of oil of chenopodium, in that the 90 grain dosage produces a better result when single treatments are compared. This disappears, however, when two half doses of oil of chenopodium are used, and a dose of 90 grains used indiscriminately would lead to serious results.—S. T. Darling, M. A. Barber, and H. P. Hacker, New York, *Jour. A. M. A.*, February 23, 1918.

NERVOUSNESS IN SOLDIERS

The general acceptance of the term "shell shock" by the medical profession is criticised by Foster Kennedy (New York), France (*Journal A. M. A.*, July 7, 1918). He considers it rather a psychoneurosis induced it is true, by shock, but due to the nonadaptation of the subject to the conditions and the easy acceptance by him of the actual disease in his case. The author defines the term "morale" in this connection and says that the emotions of fear and pain are the machinery of self preservation, that constant exposure to imminent destruction in war produces a tautness of the nervous system without necessarily conscious realization. Men may not feel conscious fear but it exists in the nervous system below the conscious threshold. The British soldier, the author says, is not much given to self analysis and investigation of his emotional processes, but tactful questionings have brought out the fact that after being wounded there is almost always a period of mental rest. In spite of the pain, the man feels that his obligations to others are in abeyance and he is relieved from anxiety caused by seeing others horribly injured or destroyed. The converse situation, in which the soldier suffers the stupefaction and bewilderment consequent on exposure to heavy shell bursts near at hand, and the feeling that the experience must be repeated indefinitely with almost certainty of ultimate horrible mutilation or death, the conscious morale and idealism of the man become drowned with the fear of death, and the longing for safety becomes overwhelmingly insistent. In different persons this conquering of the higher altruistic instincts occurs in different ways. Most often it is the result of profound fright, but in other cases there may be emotional complexes almost completely overcoming the will power. The subject the author says, is confused by inadequate classification. "I have used the term 'generalized psychoneurosis' to include those patients whose inability 'to carry on' is the result of their mental and emotional conflicts having been decided against their higher selves, whose morale has given way before the aggrandizement of their emotions of self-preservation; these are the tremblers, the amnesic, the disoriented, those with night and day dream deliria, the stuporous. The anxiety neuroses are a milder type of the same great category, are most often developed in officers, and result from prolonged strain and mental conflict rather than from single external catastrophe." Associated with the foregoing symptoms or occurring independently are various perversions of localized function, usually called hysterical stigmata, generally the result of localized suggestion on an already apprehensive mind. Two illustrative cases are given. The psychologic character of the problem and its successful treatment call for accurate technical knowledge and precise weighing of evidence so that the physician can speak with confidence to his patient. He says that we are indebted to Freud and his school for our realization that neurotic symptoms may be produced by the antagonism of mutually incompatible emotional trends. The experience of this war demonstrates the general cor-

rectness of this principle, but still more definitely disproves his deduction and that of his followers that the sexual instinct in various disguises is the only possible dynamic force involved. Shell shock is, according to Kennedy, a sort of unconscious hysterical cowardice and the term is a very inapt one. Hysteria is unsuitable for its designation. The simple word "nervousness" covers all the neurotic manifestations seen in war. The diagnosis would have to be divided into nervousness (sick), and nervousness (wounded) and he thinks that the change in military nomenclature would make it clear to both soldiers and civilians that return to the home or base is not essential and clearly indicate the propriety of dealing with such cases, both as regards diagnosis and treatment, in rest camps and especially work camps in front areas and on lines of communication.

INTRASPINAL INJECTION OF ANTIMENINGITIS SERUM

In France, as elsewhere, it is regarded as essential that antimeningitis serum should be brought in direct contact with the lesions and with the cocci that produce them, which means that in practically all cases of meningococcus infection the serum must be introduced into the subarachnoid space. Of course, cases of meningococcemia without meningitis require intravenous injections of serum, and in the earliest stages of meningococcus infection and meningitis, intravenous injections are being urged by Herrick. Local meningococcus processes outside of the nervous system, for example, pleuritis, arthritis and corneal ulcer, should be treated by direct application of antimeningococcus serum.

For lumbar puncture Dopter recommends the recumbent position on the side at the edge of the bed, with the thighs strongly flexed on the abdomen and the head on the chest. The space between the fourth and fifth lumbar vertebrae is located by drawing a line from one iliac crest to the other, this line passing across the upper limit of the space. The needle is introduced in the median line in a slightly upward direction, and cerebrospinal fluid allowed to escape, as a rule to an extent somewhat larger than the amount of serum to be injected. The serum is warmed to 38 C. (100.4 F.) and injected slowly but continuously. After the injection the patient should be placed so that the pelvis is elevated and the head and chest lowered for two or three hours, in order that the serum more readily may reach upper regions of the subarachnoid space, especially the part about the optic chiasm which is nearly always most severely involved. Before injecting the serum the spinal canal may be washed out with warm sterile salt solution, as much salt solution being used each time as the quantity of cerebrospinal fluid originally withdrawn; Aubertin and Chabanier believe that this procedure is better than injection of serum only.

In the adult it is recommended that the quantity of serum injected at one time should not be less than 20 c.c.; in grave cases large quantities are indicated; 10 c.c. is regarded as insufficient under all circumstances; even in nurslings, it is necessary to inject from 15 to 20 c.c. and sometimes 30 c.c. From these statements we learn that in France, as in this country and elsewhere, antimeningitis serum is not yet standardized in such manner than the dose can be stated in definite unite; as the matter now stands, the physician must use what he believes to be the most potent serum obtainable in maximum quantities.

A single injection even of a large quantity is rarely sufficient to arrest the infection completely; as the serum rapidly

passes into the general circulation, remaining in contact with the lesions only a short time, the improvement after the first injection usually is only transitory, and in a day or two the condition becomes worse again and new injections must be given. Hence Dopter advises that as a rule the injection be repeated daily for three or four days. If the symptoms in the meantime become worse, two injections a day may be given, provided there are no indications that the serum is not being absorbed.—Abstract *Jr. A. M. A.*, 7-6-19.

CHLORAZENE IN GENITO-URINARY DISEASES

Dr. E. Styles Potter, visiting surgeon of the West Side Hospital, Genito-Urinary Department, New York City, has the following to say of irrigation in the treatment of urethritis:

"Irrigation has long been known to be a useful method of applying locally the various remedies that have from time to time been considered favorably in the treatment of the simple and septic varieties of urethritis. After an experience extending over many years and thousands of cases, and including the use of permanganate of potash, hydrargyrum vichloride, boric acid, carbolic acid, protogol, argyrol, tr. iron chloride, infusion of common drinking tea, zinc chloride, normal saline solution, etc., I now wish to call attention to the fact that Paratoluene—sodium—sulphochloramide (Chlorazene) used as an irrigation remedy seems to possess most unusual curative effects. It has the advantage of not being irritating, is evidently a powerful germicide and appears to have a slight astringent effect as well. I have been using this remedy in acute simple and septic and anteria urethritis for some months and really the results obtained have led me to regard it as a very satisfactory remedy in the treatment of these conditions.

I have become to regard Chlorazene superior to permanganate, protogol, or other irrigating solutions in general use, and now use it exclusively."

EFFECTS OF EPINEPHRIN IN IRRITABLE HEART

Francis W. Peabody, Harry D. Clough, Cyrus C. Sturgis, Joseph T. Hearn, and Edna H. Tompkins (*Journal A. M. A.*, December 7, 1918) subjected sixty-five patients with irritable heart and twenty-seven normal controls to the epinephrin test, using the following technic: The patient was made to lie quietly for at least an hour; then his pulse and respiration rates and systolic and diastolic blood pressures were read at intervals until they were constant for several readings. Half a mil of freshly prepared 1:1000 solution of epinephrin was injected into the deltoid muscle and the readings were made every two minutes for ten minutes and then every five minutes for an hour and every ten minutes for a half hour. A positive reaction was shown by a rise in the systolic pressure or pulse rate of over ten to fifteen points, combined with flushing, sweating, increased vascular pulsation, increased tremor of the hands, and often general nervousness. Of the normal controls one man gave a slight suggestive reaction, the others being wholly negative. Of the sixty-five irritable heart cases thirty-nine, or sixty per cent, gave positive reactions, ten per cent suggestive, and thirty per cent negative reactions. With the injection of epinephrin normal men showed a slight increase in basal metabolism and in blood sugar, as compared with a marked rise in both among the epinephrin sensitive men.

PEPTIC ULCER

G. A. Friedman, New York (*Journal A. M. A.*, November 9, 1918), from the study of the literature and experimental evidence holds that peptic ulcer is not due, as commonly believed, to gastric acidity, but that the hypothesis of its causation by the disturbance of internal glandular secretion is much more probable; more especially that of the thyroid or suprarenals. Vascular changes in the gastric mucosa, such as ischemia or stasis in limited areas or in the musculature of the vessels, are produced. The spastic stomach of gastric neurosis may be caused by deficiencies in parathyroid or epinephrin secretions or excesses of thyroid products, while the subtonic stomach is due to deficiencies in thyroid products or excesses in parathyroid or epinephrin secretions. Altered peristalsis in peptic ulcer is caused chiefly by glandular neurosis of the above named glands, and this ductless gland neurosis causes secretory disturbances, either directly or indirectly, by centering its influence on the pyloric or duodenal mucosa endowed with endocrine properties.

The functional disturbances in the true endocrine glands may in time cause in them pathologic disturbances. Acute experimental ulcer, after partial parathyroidectomy or partial removal of the suprarenals does not show healing tendency. A spastic stomach may often be produced experimentally by pilocarpin injections, the action of the drug being similar to that of thyroid extract. Atonic dilation is observed after partial thyroidectomy. Clinical observations in conjunction with experimental findings suggest the endocrine initial origin of peptic ulcer, though hydrochloric acid may be a later important factor.

AUTOINTOXICATION

W. C. Alvarez, San Francisco (*Jour. A. M. A.*, January 4, 1919), protests against what he considers the thoughtless way in which the diagnosis of autointoxication is made. This, he thinks, is a popular fad at the present time, and an offhand diagnosis of many conditions that should be more accurately accounted for. There are, however, he says, many physicians who do examine their patients and who still believe after finding nephritis, hypertension, arteriosclerosis, or gastric ulcer that these diseases are due directly or indirectly to intestinal stasis. It is not sufficient, he says, to show that toxic substances can be formed during the bacterial destruction of nitrogenous matter. It must be proved that these toxins are formed in the intestine and can be absorbed by it, that they can pass through the liver, and reach the general circulation and produce symptoms. Unfortunately, little has been done beyond showing that they may be formed in vitro. Other toxins, such as albumoses and peptones, are known to be present in the intestine, some highly toxic when injected into a vein, but harmless when taken by mouth. The same may be said of many bacterial toxins. We also know that antitoxins, secretin, epinephrin and other organic substances cannot be administered successfully by mouth. Those who are impressed by the multitude of bacteria in the feces, should remember that nearly all of them are dead and that a great many of them never produce soluble toxins when alive. According to Mutch, the luxurious flora of the colon is rather a useful and protective mechanism, and that there is even less chance of absorption of toxic substances than in the small intestine. Alvarez goes far-

ther in his arguments and criticisms of the advocates of intestinal autointoxication as shown by biochemical studies. There is need for scrutinizing research reports more closely, and especially reading of original articles instead of only second hand in abstracts. Speaking of the patients who complain of constipation as the cause of their ill health, he says that there is one fact alone that would convince him that their symptoms are not due to absorption of toxins, and that is the great and very sudden relief caused by a movement of the bowels. Any physiologist would know that relief would not follow so closely on the removal of the source of the poison, but only later when sufficient excretion had taken place to lower the concentration of the substances in the blood. The removal of the cause in the intestine would not do this, and Alvarez attributes this symptom to the mechanical distension and irritation of the lower bowel by fecal masses.

The sufferers are persons who are excessively sensitive as to their bodily conditions, and in such the brain is profoundly influenced by afferent impulses coming from a distended abnormally acting bowel. The effects follow so closely on the appearance and disappearance of the cause that a roundabout chemical action is inconceivable. In the worst of the cases of "autointoxication" the sufferers are undoubtedly psychopathic and their history will give evidence of preexisting hypochondriac tenderness. The harmful effects of these autointoxication notions are illustrated by a case Alvarez reports. He prefers in the treatment, mild chemical stimuli rather than rough mechanical ones like enemas and coarse foods. The old ideas, he says, of an insidious poison make many hypochondriacs. The new explanation will help to cure many of them.

KIDNEY COMPLICATIONS OF PREGNANCY

H. G. Bugbee, New York (*Journal A. M. A.*, November 9, 1918), calls attention to the renal complications of pregnancy as seen from the standpoint of the urologist. He thinks that too little attention has been given the pregnant women when she first presents herself to the obstetrician. The patient's environments, habits of life, gastro-intestinal conditions, etc., should be ascertained, and all her organs examined, coming lastly to those of the pelvis. A chemical and bacteriological examination of a catheterized specimen of urine should be made if the patient presents any urinary symptoms. The renal function is so important in pregnancy that it is correct to consider the pregnant woman a urologic case. As organs of elimination, the kidneys have to carry off the toxins of the fetus as well as those of the mother, and compensate for the less active excretory action of the skin. Diminished activity of the woman leads to lessened activity of the organs of metabolism, and increases the amount of toxic material to be carried off by the kidneys. This increase causes kidney irritation and congestion, and predisposes to infections, which become more active with the lessened resistance of the patient. At the same time more bacteria are thrown into the blood stream and the intra-abdominal pressure mechanically interferes with normal function there. When a pre-existing kidney lesion is added, such as renal or uteral anomalies, malpositions or chronic infections, calculus, etc., the urologic aspect becomes most important. Recent investigations have given evidence that a large percentage of renal infections are hematogenous in origin. While the transmission of infection from the colon or the bladder to the kidney by a diseased appendix, a broad ligament infiltration or

along the urethral mucosa when there is a deficient vesico-ureteral valve, is possible, such cases are rare. The most important thing, next to the bacterial invasion, is lowered kidney resistance or interference with kidney drainage. The majority of patients seen by Bugbee showed active symptoms of infection. If there was drainage the symptoms were vesical, such as frequent and painful urination; if the drainage was lacking the symptoms were pain in the flank, tenderness of the costovertical angle on one or both sides, and often tenderness in front, and in some cases the kidney could be palpated. With pure drainage the patient has elevated temperature, often with slow pulse. Cystoscopic examination of a pregnant woman is seldom difficult. Enough fluid must be injected into the bladder to elevate the uterus. A moderate amount of pressure may be needed to advance the ureteral catheter on one or both sides. A tendency of obstruction is more common on the right, and between 10 and 20 cm. from the bladder. At first there is often a rapid flow of cloudy urine or pus, gradually changing to normal excretion. Bugbee makes it a rule to do as little manipulating as possible, and if the patient infected is critically ill no more should be done than to give relief by starting drainage. A number of unusual conditions met with by him are enumerated with their symptoms. In hospital cases entering late in pregnancy or at delivery, renal infections may be found only after delivery. Relief of symptoms is not alone important in these cases, but is also indicated for the sake of future health. Preexisting but symptomless disease may have the etiologic importance from the lowered resistance, and movable kidneys are especially liable to infection. Close attention should be given to the metabolism of the patient, and the relief of focal infections as early as possible is specially important. Renal anomalies, tumors, calculi, etc., also should be carefully attended to, and Bugbee claims that if relief of the kidney complications is not obtained by treatment, termination of the pregnancy may be considered. Following immediate relief of symptoms the closest attention should be given to prevent recurrence, and after labor the woman should be considered a urologic case until all drainage has been repaired.

TREATMENT OF GOITRE.

Leigh F. Watson (*Texas Medical Journal*, September, 1918) uses quinine and urea injections into the thyroid gland. These injections are preceded by injections of sterile salt solution and sterile water, in order to raise the patient's threshold to stimuli. The strength of the quinine and urea solution depends upon the type of the goitre and the character of the symptoms. Only one injection is given at a treatment, which is repeated at two to six day intervals. Ten to twenty injections are usually required to produce marked improvement. The first injections are usually given at the upper pole; when the thrill over the superior thyroid has diminished the lower pole is injected; finally, the central portion. A few minims of the concentrated quinine and urea solution are given at a treatment. The toxic cases should be watched carefully, and at the first sign of an acute exacerbation of hyperthyroidism treatment should be stopped, a hypodermic of morphine, atropine, and digitalin should be given, and ice bags applied over the thyroid and heart. Prophylactically, syrup of the iodide of iron in five to fifteen minim doses, once a day for one week in every month, may be given to children who live in goitre districts.

ENGLISH APPRECIATION OF AMERICAN M. R. C. OFFICERS

Colonel Furbush, of the Surgeon-General's office, sends the following excerpts from a letter which he received from Lieut.-Gen. T. H. Goodwin, director-general of the British Medical Service. The letter is dated May 8:

"This is only a short line as I am extremely busy. I would like to give you an extract from a letter which I have just had from G. H. Q. in France. It runs as follows:

" 'The casualties amongst medical officers during the week have been twenty-three, of whom three were killed. Five of the casualties were amongst medical officers of the U. S. A. attached to British battalions or field ambulances, four being "gas" casualties and one "missing" casualty. The work of these U. S. A. medical officers deserves special recognition. They have been invaluable and have worked under the most trying conditions and with great gallantry.'

"I thought you would like to know this, and I should be much obliged if you would show it to the director-general. You are, of course, entirely at liberty to make it known in whatever way you wish, in fact, I should be glad if you would do so for I feel strongly how much we owe to your country, and I should like your people to know how well your medical officers are doing. * * * "

General—then colonel—Goodwin, it will be remembered, was in this country for over a year, and a large number of our readers will have personal remembrance of him.

It is gratifying to read the message General Goodwin sends. It must be borne in mind that the letter from which General Goodwin sends the quotation was not written with the idea that it would be presented to American readers, but for "home consumption,"—*Jour. A. M. A.*

SURGERY

BLOOD PRESSURE IN HEAD INJURIES

In the past few years several symptoms have been added as an aid in the diagnosis of borderline cases of compression, concussion and contusion: a high systolic blood-pressure during the third stage of cerebral compression, the findings of the ophthalmoscope, and increased pressure of the cerebrospinal fluid at lumbar puncture as registered by the spinal mercurial manometer.

The ophthalmoscope is of value after the first six hours. The diagnosis of increased intracranial pressure before medullary involvement has taken place by increased pressure as ascertained by the spinal mercurial manometer has been found fallacious by many investigators. In fractures of the base it has been the author's experience that blood-pressure readings are of no diagnostic value. This is due to the fact that in widespread hemorrhages, bulbar symptoms may not occur until late.

Kocher's description of the various stages of compression show that the symptoms are the result of circulatory disturbances, i.e., a primary venous stasis, resulting in capillary anaemia. It shows also that anaemia of the medulla elicits the so-called bulbar symptoms of decompression.

The systolic pressure in traumatic compression is in large majority of cases increased, but not enough in the early stages to be of diagnostic value. The pulse-pressure is of importance, however, as is also the diastolic pressure. A high pulse-pressure is present early in cases of compression, and as the compression continues, the pulse becomes higher and the pulse-rate lower. The relation of the pulse-pressure to the pulse-rate and to the diastolic and systolic pressures must

be studied and will prove a valuable aid in diagnosis, taken together with the entire group of symptoms.—Armitage, H. M., *N. Y. M. J.*, 1918, cvii, 250.

FRACTURES OF THE HUMERUS

Adequate fixation of the humerus is especially difficult, which accounts for the frequent cases of non-union, malunion and delayed union. Un-united fracture is often the result of surgical impatience. Even a fibrous union, given time and aided by efforts to promote calcification, will often terminate in a solid bony junction. In compound fractures have the field cleansed with 5 per cent tincture of iodine, insert a long nozzled glass syringe filled with the same solution to the bottom of the wound and expel the iodine at this point.

In all fractures of the humerus that can be properly reduced, the best fixation dressing is a crinoline cast, which, if of the proper grade, will be just as strong and many times less heavy than plaster of Paris. A splint of cigar box material cut in quarter of an inch strips and stuck to adhesive plaster in such a way as to conform to the rotundity of the limb is often of great value and should be used under the crinoline case, being applied over sheet cotton alone. It should include the shoulder to the neck and be applied as a spiral figure eight that extends across the chest and under the opposite axilla; should include the elbow at a right angle with the forearm semiprone; should not include the wrist and hand to avoid subsequent stiffness. The entire forearm and hand should be carried in a sling.

When a fragment rides up from muscular action, the companion fragment must be so adjusted as to correct the deformity. Overriding in oblique fractures is corrected by extension and permanent traction to the arm placed almost at right angles to the body. A simple appliance for this is described. Fractures that are impossible to reduce or retain should be plated. Non-union must be plated or autogenous bone graft used. Fixation with plates, nails or screws in fractures near or in joints is important. A crinoline cast is also used.—Woolsey, R. A., *Missouri St. M. Assn.*, 1918, xv, 50.

DIAGNOSIS OF CANCER OF THE BREAST

The diagnosis of cancer of the breast is easy if there is no hope for the patient, but it is often quite difficult in the early stages. Horseley in the *Virginia Medical Monthly* (January, 1918) emphasizes the fact that cancer is not painful in its early stages. A benign breast tumor is more likely to cause pain than is early cancer. After ulceration has set in, with secondary infection or pressure on nerves, pain begins, but operation is then often too late. If ulceration, retraction of the nipple, and glandular involvement could be eliminated from text books as symptoms of mammary cancer, the lives of hundreds of women would be saved every year. There is no one positive early sign, but one may build up the evidence and make a probable diagnosis. The typical early cancer occurs in a woman past thirty-five years of age and begins as a single lump. Usually limitation of motion can be detected upon careful observation. The skin may not move freely over the growth or the lump itself may not move freely in the glandular tissue, though there is always some motion. Picking up the skin over the tumor sometimes shows points of attachment to the skin. The affected breast often does not hang as low as the unaffected breast. These symptoms, if present, amply justify immediate operation. If there is doubt, the patient should be pre-

pared for a radical operation and an incision made in the growth. As a rule, inspection and palpation will then determine the diagnosis. Cancer usually feels hard, and has no capsule to retract upon incision as does a benign tumor. If there is still some doubt, a frozen section should be made and reported upon at once. The incision should be thoroughly cauterized immediately after removal of the sections, and if the latter are positive, the radical operation proceeded with at once.

CLINICAL OBSERVATIONS ON THE EFFECTS OF FLAVINE IN WOUND TREATMENT.

This paper is an official report on the effects of flavine used in a series of cases at a war hospital. Flavine had previously been used in this same hospital by Prideaux and abandoned because of the unfavorable results. The clinical observations of these two men are in agreement. This report is of value because of the negative findings and the adverse criticism offered.

A 1:1,000 solution of acriflavine in sterilized normal saline was used in all cases. It was employed as a lotion for irrigating the wounds at each change of the dressings and also in gauze packs placed in the wounds and outer dressings. Dressings and packs were changed from one to three times in twenty-four hours.

Numerous cases were used as controls during these observations and in some instances it was possible to treat one or two wounds with flavine and other similar wounds on the same patient with normal saline or boric solution.

No cases were received early enough to try the prophylactic value of flavine; but two groups of patients were selected; first, those in whose wounds sepsis was active. and, second, those in which sepsis had been controlled and repair had already begun. In the first group of cases it was concluded that flavine has no influence on local reactions nor on the character of the discharge following operation, and the rate at which granulations first made their appearance was not affected by flavine; but the granulations which did form were pale and gelatinous in appearance.

In the second group of cases it was noted that necrotic shreds, sloughs, etc., appeared tough and leathery and their separation from healthy tissue was so obviously delayed that treatment with normal saline or boric solution was substituted with immediate good results.

In several wounds where healthy, bright pink granulations had formed and were almost ready for secondary suture or skin grafting, the effect was injurious and in three to five days had changed for the worse.

In concluding the article, the author states that he has entirely abandoned the use of flavine in his work.—W. Pearson, *Lancet*, London, 1918, cxciv, 370.

HIGH AND LOW SPINAL ANAESTHESIA WITH NOVOCAINE AS A METHOD OF GENERAL ANAESTHESIA.

During a part of 1917 the author, who was attached to the French Medical Mission in Roumania worked with Jonnesco, and hence had ample opportunity of studying the effects of his method of spinal anaesthesia. Coryllos is not enthusiastic about it. If low spinal anaesthesia, lumbar or dorso-lumbar, gives excellent results, cervical or high dorsal anaesthesia causes respiratory complications, cyanosis, and there was one death in a series of twenty cases of mediocervical or dorsosuperior following injection of 25 mg. of stovaine mixed with one mg. of strychnine.

Coryllos has therefore replaced stovaine-strychnine by novocaine with the most fortunate results. He has used it in a series of 219 cases and is enthusiastic over its simplicity, innocuity, and the anaesthesia obtained.

The difference in the result lies in the substitution of novocaine alone, as Coryllos has never observed any harmful effects from high puncture of the cord anywhere between the fourth cervical and first lumbar vertebrae.

SUTURLESS SKIN-SLIDING METHOD FOR THE RADICAL TREATMENT OF LUNG ABSCESS AND CHRONIC OSTEOMYELITIS.

The author notes the increased number of chronic suppurative infections due to war injuries and suggests treatment based on an experience with cases originating from various infective sources. Lung tissue is particularly favorable for the growth of infective organisms, and the foreign bodies from war injuries almost invariably give rise to subsequent pyothorax.

The diagnosis of empyema and of lung abscess is discussed, special emphasis being placed on the value of the stereoroentgenogram in the diagnosis of lung abscess. The importance of low drainage in empyema is mentioned. With most careful drainage, some cases discharge for years. Four out of five cases of this class may be cured by the injection of bismuth paste. Ten per cent bismuth-vaseline paste is used, stereoroentgenograms being taken first to ascertain pathology accurately, and after injection for further study of the filled cavity. Repeated injections over several months may be necessary for therapeutic results, injections being stopped when the discharge changes from a purulent to a serous character. Cavities holding more than 200 grams or communicating with bronchi seem less likely to heal by bismuth injection.

For cases not responding to the injection of paste, the author advises the sliding skin flap operation. The technique of this operation is fully described emphasis being laid on the importance of free exposure by rib removal. Cuts illustrate the variety of skin flaps necessary for implantation into the abscess cavity, after the latter is thoroughly cleansed with gauze and the walls scarified to promote adhesions. Gauze packing is used to press the skin flaps against the cavity walls and gauze covers the denuded surfaces. No sutures are used.—Beck, E. G., *Surg., Gynec. and Obst.*, 1918, xxvi, 259.

DIET IN JAW FRACTURE

Pont, in patients wearing splints which lock the jaws together, recommends the following daily diet: 3 liters of milk, 4 eggs, 1 liter of bouillon, 100 grams of meat juice, 1 liter of wine.

The patients are weighed every four days and in nearly all cases the weight is maintained and even augmented sometimes.

Kazanjian gives liquid food either through a porcelain feeder or through a funnel and rubber tube which can be carried far back in the mouth. His summary of dietary is as follows: (a) For acute injury of the jaw, liquid, every two hours during the day, and every four hours during the night. Milk, one pint, one egg, or strong soup or Benger's food with an egg, or Bovril made with milk, or thin arrowroot with Valentine's meat juice, or boiled custard with the addition of stimulants, brandy or port wine as ordered. In twenty-four hours there would be required four pints of milk; four eggs; two pints of soup. (b) Semi-liquid dietary for convalescent patients, same as above in four-hourly feeds. In

addition, baked custard, strained fruit juice or stewed fruit, jelly, Benger's food, bread and milk, porridge. (c) Semi-solid dietary for convalescent patients, for breakfast (7:45 a. m.) porridge, one pint, milk, one pint, sugar, tea, thin bread and butter. Alternative, bread and milk or gruel. For lunch (11 a. m.) bread and milk or beef tea with bread. For dinner (1 p. m.) minced meat, mashed potatoes, greens, milk pudding. For tea (4 p. m.) tea or bread and milk; two eggs lightly boiled, poached, fried or scrambled; bread and butter. For supper (7 p. m.) cocoa, one pint, or bread and milk.—*Int. Abt. of Surgery.*

SECONDARY TUBERCULOUS PERITONITIS

Tuberculous peritonitis is not a primary disease, says W. J. Mayo, Rochester, Minn. (*Journal A. M. A.*, July 7, 1918), but is secondary to some local focus of infection, the removal of which is desirable or essential. He calls special attention to the female genitalia as this local focus, and especially to the good effects in some cases of the removal of the fallopian tubes, which are usually open in tuberculosis. This is different from the condition that exists in gonorrheal infection, in which the fallopian tubes are closed and pus tubes are frequently formed. In tuberculosis tubal retention is much less common and the tuberculous infection passes out into the abdominal cavity, causing a more or less generalized peritonitis. Such peritonitis is essentially a conservative process leading to the destruction of the noxious agents and the case may cure itself or a cure may follow simple laparotomy. The way the tuberculosis develops in the tubes is due to the susceptibility of their ciliated epithelium like that of the pulmonary tract. He holds that removal of the tubes may be expected to cure unless some other incurable tuberculous lesions coexist. It is not at all necessary to remove the ovaries or the uterus. Barker estimates that 50 per cent of cases of tuberculous peritonitis are due to the bovine germ, and approximate estimates have been made by English and German observers. It may be that bovine tuberculosis has a more favorable prognosis than human tuberculosis. The possibility of cure of tuberculosis by simple laparotomy when the local focus cannot be discovered and removed is, Mayo says, limited to the ascitic forms of the disease, but he thinks the surgical profession has been over enthusiastic in regard to the simple operation. The fibroplastic types are benefited only if there are sacculations containing fluid; but operation is contraindicated when the adhesions fill the entire abdomen. The English school has strongly advocated drainage after laparotomy for peritonitis but it has been almost abandoned in this country on account of the mixed infection liable to follow. Mayo briefly discusses the conditions described as Concato's and Pick's disease. He concludes as follows: "It will be seen from this brief summary that the cases of tuberculous peritonitis, in which surgical treatment promises to be of great aid, rather naturally divide themselves into two groups: First, and most favorable are those cases in which a definite anatomic portion or viscus of the peritoneal cavity is involved, such as the fallopian tubes, the ileocecal coil, and the appendix, which can be removed. Second, and less favorable, are those in which the peritoneal cavity contains a considerable quantity of fluid, occupying either the entire peritoneal cavity or a large part of it, or in which the fluid is contained in loculi composed of peritoneal adhesions, dividing the peritoneal cavity into compartments containing fluid."

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JAS. R. BLOSS, Editor
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C. R. ENSLOW
J. E. RADER,
Assistant Editors
Huntington, W. Va.

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ORATION ON SURGERY

THE OPERATIVE TREATMENT OF FRACTURES

By Chas. F. Hicks, M. D., F. A. C. S.,
Welch, W. Va.

Read at Annual Meeting, Martinsburg, W. Va., October, 1918.

Mr. Chairman and Fellow Members:—

There is no doubt but that fractures cause more trouble to the conscientious surgeon than any other of the many conditions which he is called upon to treat. There is probably no subject that is more frequently discussed at gatherings of this kind than that of fractures, and there is probably also none in which discussion proves more valuable and instructive.

The treatment of fractures has not received, by the general surgeon, during the past several years, the attention that it deserves. Abdominal and pelvic surgery and their development have been of utmost interest and have occupied the time of the general surgeon during these past years.

Several important events have profoundly influenced the treatment of fractures; Since the introduction of ether anesthesia, 1846—made possible painless attempt of reduction of fractures; about twenty-five years later the development of asepsis, assured the safe care of compound fractures; still about twenty-five years after this the Roentgen Ray demonstrated to surgeons that the supposed complete reduction of a fracture, was in many cases but a failure of reduction; and again after twenty-five years more the autogenous bone graft of Murphy and Albee is affording us practically a sure cure for un-united fractures. And the temporary internal fixation with Lane's plate or Parkham's band, is preventing many non-unions, especially compound fractures of long bones.

It is unnecessary to take up the time and attempt to demonstrate to this audience that the present methods of treating fractures are not just satisfactory. The greatest points of interest to the patient, and which most necessarily concern us most, are—first to get good union—second—the period of disability; third—as little shortening as possible, fourth—pro-

nation and supination unhindered, with joint functions preserved; followed by good anatomical result.

What method of treatment are we going to adopt, that will ultimately fulfill these cardinal points? The methods are, the non-operative and the operative. By the non-operative, we understand are the reduction of fragments, the retention of fragments, by the use of traction and counter traction of all kinds, fixation by splints, etc. By the operative treatment is to secure proper and direct reduction and approximation of the ends of the fragments, and fixation of the bone if necessary with foreign material, thereby preventing subsequent deformity and possibly a delayed operation.

In non-operative treatment, some believe and teach, that traction and counter-traction are efficient means for securing perfect adjustment of fracture bones, and always a sufficiently accurate adjustment to give a functionally useful limb, and contend that an exact anatomical result is not essential for a perfect functional result. Mr. Lane and others, on the contrary, contend that an anatomically perfect reduction, and retained, is necessary to a functionally useful limb. Therefore it may look apparently, that the way to secure an anatomically perfect result after a fracture, in a majority of cases, is by the open method and direct fixation of the fragments by a plate or Parkham's band, acting as a splint to the bone, and removed when it has accomplished its purpose. Is it not a fact that the Workmen's Compensation Act has directed their attention to the financial loss due to a fracture! Is not the time, away from the earning of a living wage, the economic measure of the efficiency of fracture treatment! Is it not a fact that an anatomical deformity, following the treatment of fractures, have been used as the basis of more law suits for mal-practice, than all other causes combined?

Are we having more non-unions than formerly? I think not, but we are operating upon non-union fractures earlier than formerly, owing to the fact that we recognize by the use of the X-ray that such cases are not properly reduced, and an open operation is necessary to bring about perfect coaptation of the fragments, hence some are operated upon before they become fixed in a mal-position.

Every fracture is a hospital case, for the use of an X-ray is the only means which we have in checking up results, for the proper handling of the average case requires study and great care on the part of all concerned.

My contentions are that the majority of fractures of long bones should be treated by the operative method. I find that we are today operating more frequently upon fractures of the shaft of the femur than we did formerly, especially if the line of fracture is transverse or oblique, this is applicable with the same degree of importance, in fractures of the humerus, the ulna and radius, especially at the upper third of the shaft.

After studying the X-ray pictures of such cases we are able to make an intelligent choice of the cases which should be operated upon early by the use of Lane's plate and Parkham's band or wire, thus avoiding the painful necessity of operating late upon the bad results of those which have received the conservative or non-operative treatment. In order to get good union the ends of the fragments must be in perfect position. By operation we gain the knowledge that we know this to be true, and at this time the operation is simple, rapid and mechanically effective, temporary internal fixation is applied, and a plaster paris

dressing applied, which will eliminate the cumbersome unsatisfactory and trying extension method.

A majority of fractures occur among men employed in some hazardous occupation, such as in coal mines, railroads and mills, but I believe the mines will furnish more than all other occupations combined. During the period of the past two years there were eight hundred and forty-one cases admitted to our fracture service, including compound fractures. Two hundred sixty-two of these cases were treated by the operative method. In this series it became necessary to do an autogenous bone graft in only six cases, and amputation of four; those amputated were severe crushing injury to limb, and should have been amputated, probably as soon as admitted.

The treatment of each case of fracture is to a certain extent, a separate problem, to be solved upon its own merits and according to the injury sustained. The X-ray picture, as a rule, will give us that knowledge, whether or not an open operation is indicated. It is a frequent occurrence that we open up and adjust the fragments, in proper order and close the wound, without applying any mechanical substance, where reduction was impossible under the non-operative treatment. I believe if more operative treatment is adopted, early, less use we will find for the autogenous graft.

Repair in these fractures, treated by aseptic operation, is probably somewhat lengthened, and if a foreign body is used in direct fixation of the fragments it will cause some irritation of the wound and a discharging sinus, from the seat of the fracture, will result, producing a localized caries, if the foreign body is left in too long. We are having less of this now, for we remove the foreign body as soon as we feel that union will allow. This is determined by X-ray picture, showing that reparative process has taken place, and examination of the limb will show that union exists; other things taken into consideration, length of time, bone involved, and character of fracture and injury.

I believe the cases subjected to the operative method have gotten better anatomical functional limb, than if they were treated by the conservative or non-operative treatment.

Often we read, where some surgeon has removed a plate, band or wire, usually a plate, from some patient's limb, with much criticism and with the idea in his mind that some great insult has been done to that fracture, *as a rule, he is the other fellow,* and has no knowledge of the case, knows nothing of the character of the injury, but removes the plate. He only condemns such treatment and speaks of loose screws, etc., never mentioning the functional result of that case, his mind is wholly occupied with the loose screws, and little ostitis which he corrects. It is only fair to the primary operator, that he should speak of the anatomical functional result of this treatment; callous, alignment, whether or not any angulation, stiffness of joint, and if there is any shortening. If the other side is known and the results are carefully weighed and compared with his present findings, perhaps the primary operation was a wise one and well done.

A few days ago a man walked into the hospital and asked me to examine his leg. He stated that he had received a fracture of his femur thirteen years ago, that it was an open fracture and that I had put in a silver wire, and a few months ago it abscessed, as he called it, and had been discharging. I examined it and found he had had a compound fracture of the upper third of the femur, and a small sinus discharging serum and a little pus, which he stated started about

three months ago; we made an X-ray picture which showed the wire, and apparently very little trouble at the seat of the fracture. Being interested in the case, I went into his history, and he told me he was in the hospital three months, two months later went back to the mines and resumed his usual labor, mining coal, and had never experienced any trouble whatsoever until three months ago. We examined the leg and found absolutely no shortening, perfect alignment, good joint movement and very little callous could be detected, he had no limp, and a perfect anatomical functional limb. I advised immediate removal of the wire, but he said he was busy, at present making about five hundred dollars per month in the mines, and he could return later. He may go to the "other fellow" and have it removed, and probably be informed that such treatment might have proved disastrous, not taking into consideration that this man had a compound fracture and in five months was able to resume his usual duties in the mines, and now thirteen years later has a small sinus with a little ostitis, which can be corrected with very little loss of time.

An analysis of all results Non-Operative and Operative fractures would be very difficult to obtain; there are so many elements entering into the classification of fractures, that the prognosis and time from the earning of a living wage, would be almost impossible to get, unless the forms and charts now used by the fracture committee of the American Surgical Association be adopted. This no doubt, would facilitate getting general statistics. I have much faith in this committee and believe good result will follow this work.

I believe our society should take up this work and co-operate with this committee and make a report at our annual meetings.

Relative to compound fractures of long bones, wish to state we use temporary internal fixation of fragments, with plate, wire or band. In these open fractures, if there is extensive laceration of tissue, requiring daily dressing, it is a difficult problem to find any external fixation, suspension or extension to keep coaptation of fragments, and if allowed to remain and become fixed in this mal position, after weeks of suffering and dressing, waiting for the wounds to heal, and be free from infection, then do a subsequent operation, by the Albee inlay or Murphy intra-medullary graft; you not only have prolonged the stay of that patient in the hospital, but in my opinion, you do not get the functional result, had you adjusted the fragments in their proper position and maintained by some temporary internal fixation.

Temporary fixation with a Lane's plate, band or wire, properly applied and placed in healthy tissue, as far from the primary wound as possible, and often this is done, will maintain perfect fixation of the fragments, acting as a splint to the bone, facilitating and aiding in the dressing, while repair of the tissue is taking place. Good drainage is then established at the primary wound, a plaster paris cast applied, or good splints, as a rule it will require very little external fixation when internal fixation is properly applied.

A fair trial of the operative method under the most careful aseptic treatment will justify the following conclusions:

1. The X-ray picture will show in some cases of fractured femur, humerus, tibia, and both bones of forearm at middle or upper third, it is a physical impossibility to secure perfect adjustment, after repeated attempts of reduction.

2. Some of those cases can be treated by the open method, proper reduction of

fragments and retained, without the use of any foreign body.

3. We have over-estimated the danger of a foreign body, placed on a fracture.

4. The Lane's plate is the simplest and most efficient fixation for some fractures, especially where the picture shows a wide separation of fragments and interposition of tissue, as an example, lower fourth of the femur.

5. Parkham's band applied in fracture of the shaft of the femur, when X-ray shows oblique or spiral, will bring about immediate immobilization, requires small incision and little mutilation of tissue.

6. Temporary internal fixation insures practically anatomic reduction, and is a great aid to the dressings of compound fractures, greatly simplifying the after-treatment.

7. The early removal of band or plate, after repair of fracture, will prevent ostitis.

8. The early application of plate or band will prevent a later operation, by autogenous bone graft.

9. The X-ray has proven the unsatisfactory watchful waiting, of Non-Operative treatment, and has shaken our confidence in manual reduction maintained by splints, extension and suspension, and will force us to more accurate methods.

THE BANEFUL INFLUENCE OF UTERINE RETRO-DISPLACEMENTS UPON THE PROCREATIVE FUNCTION OF THE OVARIES.

By ROBERT J. REED, M.D., Wheeling.

Read at Annual Meeting, Martinsburg, W. Va., October, 1918.

In these tragic times when the business of the world seems to be the decimation of the race, it may not be untimely to turn our attention to the primal source of the species and give consideration to the conservation of the procreative function of the human ovary.

In the loss of this function numerous causes may be operative. The ovaries may become involved in septic inflammatory processes and receive irreparable damage. They may be the seat of new growths and of hopeless, degenerative or malignant changes. Medical assistance will strive in vain in restorative efforts, neither should it be held responsible for the failure.

But there is an obligation resting upon scientific medicine which can not be escaped. It is in the field of prophylaxis —the prevention of the milder forms of ovarian degenerative changes, by the early discovery of their causes and their timely correction.

One very fruitful source of destructive change in the ovaries, results from their faulty position, together with mechanical pressure, due to uterine retro-displacement. That cystic ovaries with thickened tunics are an invariable accompaniment of the chronic uterine retro-flexions, experienced surgeons must surely have noted. The causative relation between the displacement and this associated pathology has not always been appreciated. It seems to me that there is a direct connection and I find myself looking upon these disabled ovaries, as they appear in the operative field, as sign boards, with hands pointing backward to a definite time of oversight and neglect on the part of some one. Such conclusion seems clearly justifiable.

The ovaries are so located in relation to the uterus, being attached near the cornuae by their ligaments that it is self-evident, if it fall into a position of backward displacement, it must carry them downward into the cul-de-sac, and rest

with its weight upon them. From below there will develop almost certainly an upward pressure against them, as a result of a burdened rectum, due to chronic constipation occasioned by the mechanical pressure of the uterus. Hence the unfortunate ovaries, caught as between an upper and a nether mill-stone, seem fated to certain doom, unless there should come an early rescue.

This damaging dynamic influence will be aggravated by any force which exaggerates the version, a loaded sigmoid, increased intra-abdominal pressure from intestinal flatulency, in connection with tight or heavy clothing, forcing intestines into the pelvis. Gravity itself has a baneful effect, constantly operating in all of the usual attitudes of the body, standing, sitting, even lying, if upon the back.

More serious than the pressure effects, are the resultant circulatory disturbances, for it is again self-evident that the ovaries can not rest in the prolapsed position and the hilus of each not become twisted or angulated. The afferent and efferent vessels entering and emerging at these points must, of necessity, be involved. The efferents, will be, especially affected, and venous stasis be an inevitable consequence. Passive congestion long continued, and hypertrophic changes will begin as natural sequellae. The stroma of the ovaries increase, the tunics thicken, imprisoning the follicles as they develop, and retention cysts, result. The cysts, in turn increase the intra-ovarian tension exerting a destructive effect upon the parenchymatous tissue of the organs. Unquestionably this, in brief, is the ovaries' life history, or rather the history of the ovaries' decadence, when incarcerated under a fallen uterus. The production of the procreative elements must be greatly limited, if not wholly destroyed, or if the ova come to maturity, their escape through the dense envelope is improbable. With this evident pathological cycle in mind, the subject of backward uterine version is lifted to a plane of greater importance, than it has been, when viewed alone, and been given attention solely because of the symptoms which it directly occasioned.

Early recognition, therefore, of displacements and their prompt correction are imperative requirements, if the ovarian changes are to be averted, or be kept at a minimum and sterility avoided.

Assistance to early diagnosis may be rendered, by remembering that in two periods of a woman's life, is the susceptibility to displacement greatest. In the play-day period of adolescence from trauma, and in the child-bearing years from birth injuries or from abortion and miscarriage accidents.

There is very properly an aversion on the part of physicians to subject adolescent girls and young unmarried women to any very rigid examination, if their symptoms be pelvic. It is far from my inclination or intention, to condemn the commendable deference shown by the profession to this delicate and sensitive period of sex development; nevertheless it is a serious oversight, if as a result of this attitude, unnecessary physical discomfort is permitted to continue indefinitely, pathological changes to be wrought in the very organs that, at this time of life, are vitally concerned in the physical temperamental and indeed, moral development of the girl; perhaps permitting her to become a neurotic at least, and possibly unfitted for wifehood, possibly incapacitated for motherhood.

Diagnosis may often be approached, in fact made to the point of moral certainty at least, without a manual examination. In determining the etiological factor in amenorrhoea, dysmenorrhoea, menorrhagia in the young subject, with uterine displacement in mind, much may

be accomplished by carefully eliciting the history and closely studying the symptoms, their time of development and nature of their manifestations; all symptoms of displacement will, of course, be magnified at the menstrual epoch, and pain will be the prominent feature. Its characteristics will be significant; location, duration, severity, reflex tendencies, all have a meaning. If the evidence points to an ovarian type of dysmenorrhea, the suspicion of displacement is justifiable, for the pathology of the ovaries associated with displacement includes thickened tunica, as has been said, which being unyielding at this time of great engorgement pain is necessarily a result. It will be accentuated upon the sides rather than central, as in cervical stenosis pain. It will continue with some degree of constancy during the period and does not disappear with the establishment of the menstrual flow, as in the stenosis type, but continues during the time of ovarian congestion. It is also inclined to be reflected toward the thighs.

In connection with this type of menstruation, the history of tranna should be inquired into. If at the beginning of puberty the menstrual function was normal and became abnormal at some later date, with the history of a fall or like accident it would be reasonable to suspect a displacement. If in connection with such history, a constipated tendency developed about the same time, which did not previously exist, suspicion would be further deepened.

Menorrhagia, a prolonged flow, and metorrhagia, an interval flow, if either or both are present the thought of cystic ovaries is justifiable and they in turn, suggest uterine displacement.

If after a careful study of all the symptoms, displacement is strongly suspected, a confirmatory examination under anaesthesia, preferably nitrous oxide, is unquestionably in order. It may be made in a moment of time and without violence to even a youthful patient. Instruments are unnecessary, and the index finger the only agency needed. If the cervix is found high up and pointing posteriorily, the examination may end, as no backward uterine displacement exists. If on the contrary, it be found a short distance within the vulva, when the examining finger has been introduced to about the second phalangeal joint only, and is hugging the anterior vaginal wall, a version is probable. With the tip of the finger upon the point of the cervix and pressure by the other hand be made above the symphisis and no impulse is received upon the index finger, the inference should be that the fundus is in the posterior position, and the index finger will so find it if passed backward and upward toward the cul-de-sac. Or, if the uterus is still in version rather than the flexion position, it will be found by placing the patient on the side with the thighs flexed, when the finger can reach with ease to near the promontory, where the fundus rests in version displacement.

The youthful victim of suspected uterine version, with ovarian changes certainly beginning, is not receiving the attention her condition demands, if she receives less than is here indicated.

It is unnecessary to speak at length of the causes of backward uterine displacements in the child-bearing woman. In brief it may be stated that whatever retards involution encourages displacement. The average miscarriage patient, unless more closely guarded than is usual, is back into the active duties of her life in a few days, with the uterus in a condition of subinvolution. Therefore, displacement is more than possible. Consequently if painful pelvic and menstrual symptoms soon develop, displacement should be suspected.

In a patient who has received birth injuries, involution is retarded unless the repair work has been done early and is entirely successful. The one laceration which can not be satisfactorily repaired at the time of birth, and so often is not repaired in the after weeks as it should be, and not infrequently its very existence is overlooked, is the one, in my judgment, responsible for a greater percentage of displacements after childbirth, than any other one cause, the cervical laceration.

This is an inference from repeated observations. In the literature, it is not emphasized, so far as I can discover; but it seems a reasonable conclusion. A laceration of any depth into the uterine tissue must necessarily disturb its circulation somewhat, and so far, be a retarding influence upon the involution process. There is another factor which is the one chiefly operative, I believe. Piersol says of the utero-sacral ligament that it "contributes efficient aid in supporting the cervical segment of the uterus, which is thus enabled to maintain its position independently of that of the body." This ligament's anterior attachment is to the cervix. If the cervix be lacerated its tissues divided, the effect of the ligament will be, in a measure, destroyed. The laceration of cervix is usually lateral, either unilateral or bilateral. After laceration the anterior segment is cut off, so to speak, from the pull of the ligament, hence, the cervix is imperfectly held in its backward and upward position, and is permitted to fall forward and downward. The fundus of the uterus will naturally incline in a backward direction and with this condition, existing, the version process may be said to have begun, and a displacement is in its incipient stage.

Now the practical lesson, is for the obstetrician. He should learn to recognize lacerations of the cervix. The best time for this is at the end of the first stage of labor. If blood is apparent in the vagina after the head passes through the cervix and before a vaginal injury is possible, it is a rational inference that the cervix was torn. It should be determined positively by a speculum examination before the patient is discharged, and at an early date repaired.

Again, an obstetrical or miscarriage patient with displacement history, should invariably be fitted with a pessary before being discharged by her physician.

All uterine displacements of recent origin should be perfectly replaced, and the pessary treatment attempted. Acute cases in which the pessary fails to maintain a correct position, and virtually all chronic displacements, should receive the operative treatment. The subperitoneal shortening of the round ligaments is, without question, the best of the many operations devised.

To summarize in a sentence: Uterine retro-displacements have a direct destructive influence upon the integrity and functionating ability of the ovaries, and the recognition of these displacements with prompt correction, is one of the profession's obligations to these sacred centers of life.

TYPHOID FEVER: AN EPIDEMIC IN THE COAL FIELDS.

By VICTOR L. WETHERBY, M. D., Wilcoe, W. Va.

Read by Title at Annual Meeting, Martinsburg, W. Va., October, 1918.

During the summer and fall of 1917 I contended with a small epidemic of typhoid fever, and I wish to report some observations made in the control and treatment.

There were, in all, 26 cases, of these two were sent to a hospital after being seen but two or three times. The remaining 24 cases were evenly divided between adults and children under 15. All ran mild, uneventful courses, the mortality was nothing, there were no complications except small hemorrhages in two cases. All the cases were proved by white blood counts, by Widals, and in one very mild case a blood culture was made which was positive; I wished to rule out paratyphoid. A few Diazo reactions were made, but I have little faith in a positive and of course a negative means nothing. As the cases were mild, it was usual that they had been ill several days before I was called, so in most cases the first Widal was positive; in the three where it was not, a second made on receipt of the report, proved positive. These examinations were made in Morgantown. In no case did a clinical typhoid have a negative report; many examinations were made for patients with suspected typhoid but who were not so infected, in every case but one (a tuberculous kidney case) the report from Morgantown was a negative Widal. An excellent laboratory record.

For the most part the cases were widely scattered throughout the town, so the cause of the infection seemed likely to be the water supply. However, an examination of this, and of several springs proved negative and it was then decided, and proved in many cases, that the infection occurred from drinking water on the coke-yards, this water was known to be infected as it is pumped directly from the river and there were cases of typhoid on the river above us.

Most of the children admitted that they had drunk coke-yard water when carrying the father's dinner-bucket or while on their way to or from school. The adult males either worked on the coke-yard or came to and from the mine along the yard. They admitted drinking a little of the water now and then. The three adult females who were victims had all put one over on me by helping to nurse cases without letting me know about it. They wanted to escape vaccination, and they did.

The most important step then in the control of the epidemic was the proving of the source of the infection. This done all coke-yard employees were told by a foreman to avoid drinking the water, the yard was posted and water-boys were supplied. Children were kept off the yard.

As soon as a case was discovered it was isolated and screened in. A liberal application of lime was made to the privy and lime was supplied to the patient for use in disinfecting the excretions, including the sputum; all members of the household were given their first dose of vaccine, and as far as possible all who had been late visitors to the house were found and vaccinated. Only nursing infants escaped. In nearly all cases only two doses of vaccine were given, the second dose one week after the first. These measures certainly effected control as in only three homes did more than one case occur. In the first of these, two children were ill on my first visit and another developed fever in three or four days, in the other two homes the second cases developed within a week though they had received initial doses of typhoid vaccine.

The treatment was practically the same in all cases. Urotropin five days a week and small doses of hydrochloric acid three times a day. Of course, a liberal use was made of water internally and externally, though the mildness of the cases precluded the necessity of frequent or very cold baths. More important was the diet. An effort was made to force a high caloric diet, especially

rich in carbohydrates, on the principle that fever must have something to burn up, and it is better to supply fuel than to have the body tissues used. Many cases came through with but little loss of weight, and many symptoms usually associated with typhoid, such as loss of hair and severe sordes did not occur at all.

Now, it is a hard matter to make food attractive to a typhoid patient and those with a good cook in the family did best. Raw milk was but little given, though many dishes cooked with milk, such as custards, puddings, junket and frozen custards were used. Sugar of milk was used to sweeten drinks and cereals to supply a large amount of carbohydrate, as it takes much of it to sweeten to taste.

An effort was always made to impress the importance of sufficient food of the right kind, and typewritten menus were left with every patient. None were original, but were compiled from various articles by believers in high caloric typhoid diet.

Of the twenty-four cases I treated, ten in addition to the measures outlined above, received daily doses of typhoid vaccine for from seven to fifteen days. Stock vaccine, the same as used for immunizing purposes, was used, Relatively large doses were given to children, half the adult dose irrespective of age. Children over fifteen were treated as adults. For an adult the first dose was 125 million, the second 250 million, the third 500 million, and this was either increased to 1,000 million, or continued, depending upon the reaction. One thousand million was the largest dose given. The third, or 500 million dose would create a reaction in nearly every case. This consisted of increased temperature, a mild chill lasting about one-half or one hour, increased headache and often backache. If the same dose was given on the day following, the reaction would be less severe and the temperature about one degree less. The 1,000 million dose on the next day would then produce a reaction approximating the first dose of 500 million, and the succeeding dose of 1,000 million would give a somewhat milder reaction. However, every dose of this size would be followed by a reaction, though often the chill would be missed.

In two instances I had two cases of nearly the same age in bed side by side. In each home one of the patients was treated with vaccine and the other without. I was unable to note, either in these cases or in any others, that the vaccine influenced the severity or the duration in any way except that those treated with the vaccine had the added discomfort of the reactions.

Mostly they dreaded the injections and often insisted that they were made worse by them. If the vaccine is given in such small doses that no reaction ensues, I can't see how there would be the remotest chance for favorable action, while it *is* possible to theorize on the benefits following a series of moderate reactions.

Typhoid vaccine is nothing but a solution of killed typhoid bacteria and I fail to see how there can be any sound theory on which to base a supposition that it will do good. What reason have we to believe that a typhoid patient has a lack of killed typhoid germs in his system?

I am well aware that there have been a great number of reports of supposed favorable action by typhoid vaccine. These are, of course, worthless unless there have been control cases in the same epidemic treated in the usual way. I wish to emphasize that there should be control cases in the *same epidemic*, as it is well known that typhoid varies in severity in different epidemics. Last year the cases were all mild and had I treated but two or

three cases and given them all vaccine I would have sworn that the vaccine modified the course.

I cannot help but believe that large doses of vaccine might be dangerous in a severe case, that the added strain of the reaction might be the deciding factor in producing a fatal termination.

While I realize that my cases were too few in number to be very conclusive, still I believe that it is fair to draw the conclusion that has been pointed out: that typhoid vaccine is of doubtful value, at least, in fever cases and may be capable of considerable harm.

MIDWINTER VACATION NOTES

To the Editor:—

The last time I wrote up my vacation notes I said I had spent just twenty minutes of REAL vacation, this time I had a few days in which I did almost nothing.

I did dabble a little in business, hunted and fished a very little, but each day there were several hours of good, strong loafing. This was done in Florida, Fort Meyers. Commend me to Florida for a real vacation.

On my way back I had a most pleasant stay with Lieutenant-Colonel Babcock, at General Hospital No. 6, Fort McPherson. Fort McPherson is about four miles from Atlanta, has a capacity of about 2500 beds, mostly surgical. In fact, there were but 130 medical patients when I was there.

Dr. Babcock has had charge of the surgical service for some months, the story of his stay at Fort McPherson is most interesting. Upon his arrival he was told that no surgeons were wanted. Was given charge of a safe for storing the valuables of the soldiers. Whether his honesty attracted attention or whether the authorities became afraid of him, I know not. Anyway he was advanced to the care of the cess pool. This could not be stolen and possibly his previous experience in appendical and other pus might come in useful.

In due time a change of odors was deemed advisable and he was advanced to the honorable station of anesthetist. From there he came into his own—Chief of the Surgical Service.

Now please don't jump to the conclusion that I am attempting any undue criticism of the usual army red tape, while some is no doubt due. Nevertheless, I fancy Dr. Babcock rather liked it, *after it was over* and looks upon it as a good joke. How I should like to have seen him standing sword in hand guarding the Waterberry watches and trinkets of the soldiers! Quite a change from his Walnut Street, Phila. office with its crowded waiting rooms.

I was pleasantly disillusioned in some ways while at the Fort. I expected a warm welcome form Col. Babcock or I should not have gone there. The attitude of his subordinates did not greatly concern me but if I had formulated an opinion I would have expected it to be cool. In this I would have been mistaken for it was most cordial, just such as I would have met at any other clinic. To Capt. Clarke of the X-ray laboratory and Capt. Anderson of the empyema wards I am especially indebted.

Mistake No. 2. I had supposed that in a goverment hospital expense was a matter of no moment, that even wasteful extravagence was more than likely. Such is certainly not the case here; even the slightest details are watched. Thus spool silk is often used to save gut, the dressings are washed and resterilized, lights turned out whereever possible, spectators gowns worn several times to save laundry. In fact there were many economies which I have been unable to prac-

tice in my small institution and I am supposed to be considerable of a tight wad.

I happened to be present on a few occasions when Col. Bratton, the Commanding Officer, and Dr. Babcock were discussing the purchase of supplies and equipment. It was probably more carefully gone into than if the purchase had been a personal one. Col. Bratton looks every inch the soldier, an officer and a gentlemen of the old school. From Mo. (really S. C.) he would have to be shown, but once shown he would stick until Hades froze over. He gave me a cordial welcome and directed that every courtesy be extended me.

Mistake No. 3. I ran across a man who told me he had a wounded son in the hospital and was lamenting the fact that (as we both supposed) it would be impossible for him to have his home physician see the boy. He had no criticism to offer, believed that the boy was being properly treated but would feel so much bettter if the home doctor could take a look and see how things were going. I tried to smooth things over by telling him that his boy was in excellent hands, that the surgeons here had had an immense experience, etc., etc.

That evening while dining with Col and Mrs. Babcock I mentioned the conversation I had had with the father. To my surprise and delight I was told to tell the father to wire for his doctor, that in all such cases both Col. Bratton and Col. Bobcock were anxious for the home physicians to visit the wounded. "We will detail a physician to go with him to explain what has been done, what is being done, listen to any suggestions he may have to make and all we ask is that he shall be as square with us as we shall be with him" said Dr. Babcock.

The six operating rooms are oftimes all in use.

The following is the schedule for the first day I was there Neurolysis Left Ulnar Nerve, Neurolysis Left Musculo Spiral Nerve, Neurolysis Brachial Plexus Left. Appendectomy, F. F. C. Cast with Window, Revision of stump, Resection of Nerve, Sequestrotomy Arm, Skin Grafting, Excision of Scar, Osteotomy Excision of Scar; Right Ankle; Amputation Middle and Lower third right leg, Osteotomy; Osteotomy shoulder joint, empyema, Excision of scar.

Dr. Babcock is doing all the nerve surgery, much of the other surgery and in addition the usual unavoidable detail work incident to his station.

Nerve surgery is soul-racking, body breaking, bach-aching work, oftimes it takes two or three hours for an operation and there were usually two or three per day. The ends were oftimes hard to locate, difficult of access; worst of all, hard to bring together. It is wonderful the distance that they can be brought together, this is accomplished by changing the position of the part or re-routing the nerve.

So far no case has been found in which the ends could not be brought together. It is very usual to find a gap of seven to ten cm. and even thirteen cm. has been found. The ends are cut little by little with a Gillette razor blade, held in a haemostat until sound structures are reached. Then with a No. 12 straight needle threaded with 000 black silk, the ends are approximated. Usually from nine to eighteen stitches are employed, but as many as thirty-four have been used. The bite of the needle embraces only the sheath of the nerve and is very short, in length I should say not over 1-32 to 1-16 inch. This work is done largely under local anaesthesia, brachial plexus anesthesia or spinal anesthesia, and in nearly all cases without any form of constriction. The nerve ends are

pinned to a special approximating instrument and the electric conductivity and nerve pattern studied during operation.

It is too early to write of ultimate results, but so far there is every reason to be encouraged. As a general rule Dr. Babcock feels that when one month has elapsed in a neurolysis case and four months on a suture case with no improvement, it is probably a failure and should be re-operated.

After suture the axis cylinder grows down about 2mm. a day as shown by tingling on percussion. Very little change is to be expected for about eight weeks, but the results are not all uniform in this respect. After operation the nerves have to be re-educated; this is a matter in which Mrs. Babcock is much interested. It is accomplished by electrotherapy, massage and passive movements with repeated sensory plottings.

The day before I arrived Dr. Babcock did an interesting operation upon the wife of a soldier—appendectomy via the vagina. His reason being an abscess had formed low down in the pelvis and he believed it could best be reached that way. She seemed to run the usual pus course and recovered.

Naturally, the empyema cases are attracting much attention, there have been hundreds of them. These cases were under the charge of Captain Anderson, who has promised to write for us an article on his experience while in army service.

Dr. Babcock says that with free chest opening and careful persistent Dakin treatment, he finds nearly all empyema cases will finally come to a cure without other means. But the drainage must be free and all pockets open and the Dakin used properly. Contrary to Diloune, even pulmonary fistulae and large cavities of even seven months standing will finally contract and close with little chest deformity.

I am always interested in wound dressings as my views are somewhat at variance with those of many others. At Fort McPherson, as at many other places, it seems to me too much elbow grease was used. I have seen an officer of considerable rank work over a wound for much longer time than seemed good to me. When he got through the wound certainly looked clean, but had he helped healing? When a wound has dependent drainage, all foreign bodies and necrotic material removed, what more can be done to promote healing by means of swabbing, probling, wiping, etc?

How we recall the irrigating outfits of our youthful professional days, likewise we remember that we seldom see them now. Yet it seems to me irrigation is less harmful than swabbing.

If *work* will make a wound heal, why not try it on skin grafts, operation wounds, etc?

In conclusion, let me say that I came away with a most excellent opinion of the character of the work being done and the men who are doing it. Also let me say that they were working much harder than I had supposed.

A. P. BUTT, M. D.,
Davis, West Va.

Program of coming Annual Meeting of the State Association, to be held at Clarksburg, May 20, 21 and 22.

GENERAL ASSEMBLAGE

Tuesday, May 20; 9:30 a. m.

American Dining Room

Call to order, President Robert J. Reed, M. D., Wheeling.

Invocation—Rev. E. B. Turner, D. D., Clarksburg.

Welcome on Behalf of County—Judge James Robinson, Clarksburg.

Welcome on Behalf of Society—President B. F. Shuttleworth, Clarksburg.

Response on Behalf of Association—John L. Dickey, M. D., Wheeling.

SCIENTIFIC PROGRAM

1. The American Medical Association and the Medical Reserve Corps—T. Judd McBee, M. D., Morgantown.

MEDICAL SECTION

Tuesday, May 20, 1:30 p. m.
American Dining Room

2. Pulmonary Tuberculosis—C. R. Woolwine, M. D., Davy.

3. Examination of the Chest for Tuberculosis—John W. Moore, M. D., Charleston.

4. The X-ray as a Diagnostic Aid in Chest Conditions—W. A. Quimby, M. D., Wheeling.

Discussion opened by E. E. Clovis, M. D., Terra Alta.

5. Laboratory Methods as Aids in Diagnosis of Disease—Charles E. Gabel, M. D., Charleston.

Discussion opened by Mabel Clovis, M. D., Wheeling.

6. Some Observations in Bronchoscopy and Oesophagoscopy—Arthur K. Hoge, M. D., Wheeling.

Discussion opened by Thomas W. Moore, M. D., Huntington.

7. Encephalitis Lethargica—Walter E. Vest, M. D., Huntington.

Discussion opened by C. L. Holland, M. D., Fairmont.

SURGICAL SECTION

Tuesday, May 20, 1:30 p. m.
Waldo Cafe

Chairman—W. S. Fulton, M. D., Wheeling.

Secretary—C. R. Ogden, M. D., Clarksburg.

8. Address of the Chairman.

9. Joseph Price, Pioneer in Simplified Aseptic Surgery—A. P. Butt, M. D., Davis.

10. Inflammation of the Prostate—H. G. Tonkin, M. D., Martinsburg.

11. Prostatectomy—T. K. Oates, M. D., Martinsburg .

Discussion opened by Frank LeMoyne Hupp, M. D., Wheeling.

12. Recurrence of Inguinal Hernia After Operation—J. Ross Hunter, M. D., Huntington. Discussion opened by J. E. Cannaday, M. D., Charleston.

13. Pleuritis, Suppurative, Surgical Treatment of—T. L. Harris, M. D., Parkersburg. Discussion opened by B. F. Harden, M. D., Wellsburg.

PUBLIC HEALTH SESSION

Tuesday, May 20, 8:15 p. m.
American Dining Room

14. President's Address—Our Obligations with Respect to the Public Health Problems of the Reconstruction Period.

15. Program of the Federal Government Relative to Public Health Questions. Address by a Representative of the U. S. Public Health Service, Washington, D. C.

16. Hospital Efficiency—John G. Bowman, Director of the American College of Surgeons, Chicago.

MEDICAL SECTION

Wednesday, May 21, 9:00 a. m.
American Dining Room

17. Clinical and Pathological Studies of Pandemic Influenza.—Aaron Arkin, M. D., Morgantown.

18. Influenza Prophylaxis—S. D. Hatfield, M. D., Iaeger.

19. "Damn the Flu, Anyway,"—C. H. Maxwell, M. D., Morgantown.

20. Differential Diagnosis of Pleurisy with Effusion—D. A. MacGregor, M. D., Wheeling. Discussion opened by John W. Gilmore, M. D., Wheeling.

21. The Practical Side of a Heart Murmur—Harry M. Hall, M. D., Wheeling. Discussion opened by M. D. Cure, M. D., Weston.

22. The Testing of Donors for Blood Transfusion—C. W. Waddell, M. D. Fairmont.

23. The Indications for Blood Transfusion and its Technique by Direct Method of Lindeman, with Report of Cases—J. R. Caldwell, M. D., Wheeling. Discussion opened by R. E. Venning, M. D., Charles Town.

24. Some Practical Applications of the Cystoscope—H. A. Giltner, M. D., Parkersburg. Discussion opened by H. S. West, M. D., Wheeling.

SURGICAL SECTION

Wednesday, May 21, 9:00 a. m.
Waldo Cafe.

25. Fractures—W. W. Golden, M. D., Elkins.

26. Non-union of Fractures and Their Treatment—Andrew J. Noome, M. D., Wheeling. Discussion opened by C. S. Hoffman, M. D., Keyser.

27. Breast Tumors from the Standpoint of the Surgeon with Limited Equipment—James Schwinn, M. D., Wheeling.

28. Ruptured Tubal Pregnancy: Report of Fifty-three Cases—Charles F. Hicks, M. D., Welch. Discussion opened by R. U. Drinkard, M. D., Wheeling.

29. Indications for and Operation of Vaginal Hysterectomy — Charles M. Scott, M. D., Bluefield. Discussion opened by Chester R. Ogden, M. D., Clarksburg.

GENERAL SESSION

Wednesday, May 21, 1:30 p. m.
American Dining Room

30. Oration in Medicine: Neuro-Psychiatry in Military Service—Charles W. Halterman, M. D., Clarksburg.

31. Oration in Surgery: Surgery of the Chest in Military Practice—O. F. Covert, M. D., Moundsville.

32. Lessons from the War in Industrial Injuries of the Extremities—Lieut.-Col. David Silver, Orthopedic Division, Surgeon General's Office, Washington, D. C.

33. The Significance of Pelvic Disorders in the General Diagnostic Study of Women—Edward H. Richardson, M. D., Baltimore.

34. Mental Defectives and Military Service—C. A. Wingerter, M. D., Wheeling.

35. The Urachus, Urinary Diverticula and Uterus Acolis, Lantern Slides—B. Merrill Ricketts, M. D., Cincinnati.

PUBLIC HEALTH SESSION

Wednesday, May 21, 8:15 p. m.
American Dining Room

36. The Past and Present of the State Health Department—S. L. Jepson, M. D., State Commissioner of Health, Charleston.

37. The Tuberculosis Situation in West Virginia—Harriett B. Jones, M. D., Glendale, Executive Secretary, Anti-Tuberculosis League.

38. Child Welfare—Mrs. Jean T. Dillon, Director of State Division Child Welfare, State Board of Health, Charleston.

39. The Venereal Disease Problem—F. F. Farnsworth, M. D., Medical Officer in Charge U. S. Public Health Service, Charleston.

40. Organization of Public Health Forces in Epidemic Emergencies—M. B. Williams, M. D., Health Commissioner, Wheeling.

41. The Medical Inspection of Schools—Charles H. Keesor, M. D., Wheeling.

HOUSE OF DELEGATES

Thursday, May 22, 8:45 a. m.
American Dining Room

Election of Officers.
Unfinished business.

GENERAL ASSEMBLAGE

Thursday, May 22, 10:30 a. m.

American Dining Room

42. The Relation of Static Mesenteric Circulation to Pelvic and Constitutional State in Women—Charles A. L. Reed, M. D., Cincinnati.

43. Acute Intestinal Obstruction—G. A. Hendon, M. D., Louisville.

44. The Failure of Restricted Operations in Cancer of the Breast—Alexius McGlannan, M. D., Baltimore.

GENERAL ASSEMBLAGE

Thursday, May 22, 1:30 p. m.

American Dining Room

45. Approved Modern Methods of Anaesthesia—L. D. Norris, M. D., Fairmont. Discussion opened by Charles G. Morgan, M. D., Moundsville.

46. Electricity in Gynecology—Oscar B. Beers, M. D., Buckhannon. Discussion opened by Charles H. Clovis, M. D., Wheeling.

47. Rat Bite Fever—A. T. Post, M. D., Clarksburg. Discussion opened by Charles H. Keesor, M. D., Wheeling.

48. The Management of Injuries of the Peripheral Nerves—Tom O. Williams, M. D., Washington, D. C.

PROGRAM OF WEST VIRGINIA HOSPITAL ASSOCIATION

Clarksburg, May 19, 1919; 2 p. m.

President's Address—Dr. J. A. Guthrie, Huntington, W. Va. Subject: "Hospital Training School."

REPORT OF COMMITTEES

Dr. W. W. Golden, Elkins, W. Va. Subject: "Review of Hospital Legislation of the Last Meeting of the Legislature.

Dr. J. Ross Hunter, Huntington, W. Va. Subject: "Relation of the Attending Physician to the Hospital." Discussion opened by Dr. E. H. Thompson, St. Luke's Hospital, Bluefield, W. Va.

Dr. W. A. MacMillan, Charleston, W. Va. Subject: "Financing Hospitals." Discussion opened by Dr. A. K. Kessler, Huntington, W. Va.

EVENING MEETING, 8:30 P. M.

Dr. C. R. Ogden, Clarksburg, W. Va. Subject: "Hospital Economy." Discussion opened by Dr. C. S. Hoffman, Keyser, W. Va.

A SOLDIER'S PRAYER

Now I lay me down to sleep,
I pray the Lord my gun to keep;
Grant no other soldiers take
Socks or shoes before I wake.

Lord please grant me with my slumber,
To keep my cot upon it's lumber—
May no peg or guy-ropes break
To drop the tent before I wake.

Keep me safely in Thy sight,
Grant no fire drills to-night,
And in the morning let me wake
Breathing scents of sirloin steak.

God protect me in my dreams
And make it better than it seems;
Grant that time may swifly fly
That sends me home to live or die.

Deliver me from work or drills,
And when I'm sick don't feed me pills.
If I should hurt this head of mine,
Do not paint it with idoine.

Lord, grant me a feather bed,
Where I long to lay my head,
Far away from all camp scenes
And the smell of half-baked beans.

Take me back to the land
Where people walk without a band,
Where no thrilling bugle blows,
And the women wash the clothes.

God, Thou knowest all my woes,
Give me back my "civvy" clothes,
Take me back, I promise then
Never to enlist again. Amen.

—ANON.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., Editor
C. R. ENSLOW, M. D.
J. E. RADER, M. D. Assistant Editors

Huntington, W. Va., May, 1919

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

ADVERTISEMENTS

Advertising forms will go to press not later than the 10th of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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DELEGATES TO A. M. A. FOR 1919-1920—C. R. Ogden, Clarksburg, W. Va.

ALTERNATE—W. W. Golden, Elkins, W. Va.

COUNCIL

FIRST DISTRICT—H. R. Johnson, Fairmont, W. Va., one-year term; H. P. Linz, Wheeling, W. Va., two-year term.

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SIXTH DISTRICT—H. L. Goodman, Charleston, W. Va., one-year term; Charles O'Grady, Charleston, W. Va., two-year term.

The Journal is reaching the members late this month, due to the fact that it had to be held up awaiting the program for the State Meeting.

I would ask that you go over the program carefully and see the really fine things which will be given to us at Clarksburg. It is going to be a great meeting and we hope that the members will turn out in full force.

Attention is also called to the meeting of the West Virginia Hospital Association. This will be held in Clarksburg the day before the Medical Meeting begins, which is May 19.

The program for this meeting is also printed in this issue of the Journal, and it is to be hoped that the members who have hospitals or are connected with one will make an especial effort to get away one day sooner, that they may take part in the deliberations of the Hospital Association.

If you have not written for your hotel reservation, do so at once. We are going to have a very interesting and profitable meeting.

Be sure to come.

State News

Mrs. Ray M. Bobbitt of Huntington, has received word that her husband has been made a captain in the medical corps.

Dr. B. H. Moffatt, formerly of Mannington, W. Va., is now located at Shelby, Ohio.

Dr. A. C. Ernest, who has been in practice at Fairmont, has moved to B. & O. Station, Wheeling.

Dr. and Mrs. B. B. Wheeler, Clifton Forge, Va., recently spent a short time in Baltimore, Dr. Wheeler having been called there on professional business.

Dr. Edwin D. Wells, in charge of eye, ear, nose and throat cases at the Chesapeake & Ohio hospital, has moved to Huntington and will be associated with Dr. T. W. Moore. He has brought his family to Huntington from Clifton Forge and they are at home on the Southside. The family consists of Mrs. Wells and Miss Nancy Belle Wells.

Dr. J. T. Leftwich, recently of Lawton, W. Va., is now located at Highland Springs, Henrico County, Va., for the practice of his profession.

Dr. and Mrs. C. W. Warnock have returned to their home in Huntington after an enjoyable vacation in the south, at Ponta Garta, Florida.

Dr. Ira J. Haynes, of Richmond, Va., who recently retired from practice has gone back on the road for the W. B. Saunders Company and will attend the State Association at Clarksburg.

Dr. T. N. Goff of Kenova, who lately received his honorable discharge from the A. M. C., visited in Cleveland, Ohio, recently.

Dr. K. H. Trippett, of Buckhannon, W. Va., lieutenant in the M. C., who has been in Base Hospital service overseas, is now in the Army Detachment School, the University of Lyon, at Lyon, France, taking a three-months' course in surgery.

Dr. W. E. Vest, internist on the staff of the Chesapeake & Ohio Hospital, has returned to the city from Camp Wadsworth, Spartansburg, S. C., where he was for many months chief of the medical service at the base hospital. He was a captain in the medical department of the army. He has been discharged and is in Huntington to resume his practice. He will continue his connection with the Chesapeake & Ohio Hospital and for the present his offices will be there also.

Dr. J. Boyce Taylor, who has been on the hospital staff during the war period, will continue to discharge his duties there.

Dr. Joseph Louis Ransohoff announces his return to civil practice, Livingston Bldg., Cincinnati.

Dr. Henry E. Davis has received his honorable discharge from the army and is located at Williamson.

Sergeant C. H. Lehman, who for many years has visited the doctors of West Virginia in behalf of the well known surgical instrument manufacturers, The Max Wocher & Son Company, of Cincinnati, is now back on the job. His knowledge of surgical instruments was recognized by the War Department when they transferred Mr. Lehman from Camp Taylor to the Medical Supply Department, New York City, and up to the

signing of the armistice he gave valuable service in the surgical instrument section. Mr. Lehman will be pleased to meet his many friends at the coming convention at Clarksburg.

A new hospital is being built at Montgomery. Miss Anne Bryant, formerly of Huntington, will be the superintendent of nurses.

Dr. William R. Laird, formerly of the Sheltering Arms Hospital, will be chief surgeon at this institution. With him will be associated Dr. William Nelson, who is now taking a post-graduate course in eye, ear, nose and throat at the New York eye, ear, nose and throat hospital.

Miss Margaret Hayes of New Orleans, who is to administer anaesthetics, is now taking a special course in X-ray work in preparation for her duties at the hospital. Before the hospital opens Dr. Laird will take some special work in surgery at the Mayo Hospital.

Dr. B. F. Brugh will also be a member of the hospital staff. The institution is to be completed within ninety days.

Dr. F. A. Fitch of Huntington. spent ten days in Baltimore in April. While there he attended a number of clinics at Johns Hopkins Hospital.

Dr. McVea Buckner of Huntington, is at home aften eighteen months of service overseas. Dr. Buckner has taken charge of Dr. J. C. Geiger's office, where he will look after his own practice and that of Dr. Geiger's until the latter's return from the hospital, where he is quite ill.

The Wayne County Medical Society has surrendered its charter as an individual component of the State Association. The members of this society at the last meeting of the Cabell County Medical Society, were accepted to membership in the latter body.

Dr. A. G. Rutherford of Thacker, has purchased an extensive tract in Ricketts Place, at Huntington, and will build a home there soon.

Medicine

CHILDREN SUCCESSFULLY VACCINATED AGAINST SCARLET FEVER

Dr. Cristina's further experience has apparently confirmed the efficacy of the serovaccine obtained from the desquamated scales of scarlet fever patients. They seem to contain an anti-body which, he says, appears to insure immunity to the disease when injected subcutaneously. Horses treated with it developed antibodies in their serum to an amboceptor power of 2,000. For details of the technic he refers to his communication in 1916 (briefly summarized in The Journal, September 30, 1916, p. 1049). Of forty children immunized by this means and left in the same room, sleeping in the same bed, with scarlet fever patients, not one contracted the disease. Of twenty-five children in families where there was a case of the disease, not one contracted it, and no case of scarlet fever developed in the hospital wards after the disease had been imported. Dr. Cristina and Pastore now announce that the method has stood so many tests that this immune prophylaxis against scarlet fever can be applied on a large scale. They have never witnessed any by-effects from it except very rarely a slight fleeting eruption — evidently an anaphylactic phenomenon—which might suggest scarlet fever if it were not for its rapid subsidence and the absence of all throat symptoms and fever. The children thus immunized have been followed for six

months, and the continued presence of the induced amboceptors has been confirmed to date.

VAGINAL DOUCHING

Fothergill says the vaginal douche can has, on the whole, been a curse to womankind rather than a blessing. Just as there was a pessary age, characterized by the haphazzard use of pessaries in the treatment of the minor ailments of women, so there has been a long period of indiscriminate douching which has not yet reached its belated end. For a time douching remained under the control of the medical profession; but then the general public began buying douche cans on its own account, and the pernicuous but apparently seductive habit of antiseptic douching is now generally begun on the advice of an elderly relative. Every patient who complains of minor pelvic ailments should be asked whether she douches or not; and, if she says "Yes," should be told to stop it. The vaginal surface has no glands, and is not a mucous membrane, but is covered by stratified squamous epithelium, which, though very strong and resistant to infection, is, so to speak, not quite waterproof. Thus the vaginal secretion is simply serum which exudes from the surface of the squamous epithelium, and which acquires its normal creamy appearance by admixture with leukocytes and epithelial debris. Sliminess of the vaginal discharge is due to an excess of mucous which comes from the lining of the uterus and not from the vaginal wall. The normal vaginal secretion is definitely acid in reaction, and this acidity inhibits the life of most septic and pathogenic organisms. Thus the normal content of the vagina is a barrier to ascending infections, and it is generally sufficient to protect the uterus.—*Abs. Jour. A. M. A.*, 6-8-18..

DIGATALIS IN PENUMONIA

Digatalis is the most useful drug in cases of pneumonia with organic heart disease. Fussell in a recent issue of the *Pennsylvania Medical Journal* says it should be given from the beginning of the attack in moderate doses, ten drops of a good tincture three times in twenty-four hours. This dose can be increased if the heart shows signs of dilation; 10 drops used by the mouth or hyperdermically can be given every three hours, care being taken that the quantity given is not large enough to cause poisoning. The digitalis must be obtained from a source which will insure a potent article.—*Am. Medicine.*

INFLUENZAL BRONCHOPNEUMONIA: VACCINE THERAPY.

Wynn's experience leads him to believe that prompt treatment with vaccines (pneumococci, streptococci, influenza bacilli), within a few hours of the onset will definitely abort an attack of influenza. In the cases in which bronchopneumonia is present from the first, vaccine seems often to have the same good effect when it is injected early. The striking feature with the use of vaccines, as noted by Wynn, has been the almost constant fall in temperature following the injection. He says that the earlier the injection is made, the more likely is the fall to be final. In cases injected after the second day, more than one injection is usually required before the temperature finally settles. Occasionally, the first dose fails to cause a drop in the temperature, and a second larger dose is required to bring this about. If the fall of temperature occurred alone, or was followed by collapse or other bad signs, it would not be desirable, but the fall is associated with improvement in the aspect and in the pulse and respir-

ation rate, which, in Wynn's opinion, indicate that it is due to a definite immunizing influence. The important points for successful treatment are to give an adequate dose as early as possible after the onset of symptoms. Inadequate dosage and delay will cause disappointment.

VIRULENT ORIENTAL SMALLPOX

Riggs presents the results of his study of eight cases of smallpox occurring among a thoroughly vaccinated group of men. During the winter of 1917-1918, China suffered severely from epidemics of smallpox, diphtheria, scarlet fever and plague, and each of these diseases manifested an unusual degree of virulence. The eight men attacked were believed to be as fully protected against smallpox as is possible by means of vaccination. The interest in the situation, then, was in the result which might be expected to follow when a most virulent type of smallpox encounters a thoroughly vaccinated group of men.

In this instance, when more than 1,000 men were fully exposed to the most virulent epidemic that had visited the Chinese coast in many years, there resulted eight cases of smallpox. The virulent infection overcame whatever immunity had been established in the individuals by vaccination and resulted in one or another of five uncommon varieties of the disease. The discrete variety, the type ordinarily met with, was conspicuously absent. The five varieties occurring in this epidemic were modified, abortive, confluent, pustular-hemorrhagic and purpuric smallpox. Four of the eight cases were very mild and soon terminated in recovery without complications. With the remaining four, the infection took a violent form and ran a rapidly fatal course. Riggs urges that in the presence of a virulent form of smallpox, at least three vaccinations at one-week intervals, should be resorted to, as this method seems to obtain a large number of "retardation" takes which in all probability have considerable immunizing power.—Bulletin Medical Health Officer, Jersey City.

BRONCHIAL ASTHMA

Some of Rackemann's conclusions may be summarized as follows: "Bronchial asthma" is a symptom of some other disease condition. The 150 cases of asthma studied can nearly all be divided according to the etiology of their attacks, into various subgroups under the general headings of "extrinsic asthma" and "intrinsic asthma." Extrinsic asthma includes 28 per cent; intrinsic asthma includes 53 per cent of the entire group—the other 19 per cent being unclassified. A history of either asthma, hay fever or food poisoning, in the immediate family, occurs in 58.7 per cent of the cases of extrinsic asthma, but in only 10.5 per cent of the cases of intrinsic asthma. Skin tests are of great assistance in confirming the diagnosis. Skin tests alone are of no value unless reasonably compatible with the patient's history or experience. A positive skin test is a necessary preliminary to successful specific treatment. The "nervous" element is very important in asthma, but probably does not explain why certain individuals have asthma. Treatment resolves itself into the treatment of the exciting cause. Various different therapeutic procedures sometimes yield favorable results, but these cannot be explained. The real problem—what is the fundamental disturbance of anatomy or physiology which expresses itself by attacks of asthma—remains unsolved—*J. A. M. A.*, 11-9-18.

WHAT IS PTOMAIN POISONING?

The term "ptomain" poisoning has become a cloak for ignorance. Jordan says

that "ptomain poisoning is a convenient refuge from etiologic uncertainty." In fact, any acute gastro-intestinal attack resulting from a great variety of causes is apt to be called "ptomain" poisoning. Selmi, in 1873, first used the word ptomain to include the poisonous products of putrefaction which gave the reaction then looked on as characteristic of vegetable alkaloids. From the time of Selmi, when ptomains were regarded as animal alkaloids, our conception of these substances has changed markedly. The last attempt to give precision to the term was by Vaughan, who defined ptomains as intermediate cleavage products of protein decomposition. Rosenau and his associates at Harvard have been searching in vain for the past year and a half for ptomains that might cause gastro-intestinal or other symptoms. Split products of protein putrefaction are readily isolated. Some of these products have physiologic activity, but none of them thus far have been demonstrated to be poisonous when taken by the mouth. The so-called ptomains isolated and described by Selmi, Necki, Brieger, Schmiedeberg, Faust and Vaughan were usually obtained from putrid organic matter that had decomposed past the point at which it would be used as food. Furthermore, most of these substances were tested by injecting them subcutaneously or intravenously into animals. Many substances are poisonous when thus introduced parenterally, though they may be harmless by the mouth. Again, many of the so-called ptomains isolated and described have since been shown to contain impurities. Chemists are now seldom confident of the purity of protein fractions, even when obtained in crystalline form. The chemical search for split protein products as the cause of ptomain poisoning has practically been abandoned. Most of these split products are amins, which are either not poisonous at all, or no more so than their corresponding ammonia salts. The chemical resemblance between muscarin and cholin has directed the work toward the phosphatids, but thus far this line of research has not helped solve the puzzle of "ptomain" poisoning. Chemists avoid the use of the word ptomains, for the reason that it lacks precision. This is a curious instance of the popular use of a technical term that sounds well, but means little. Only clinicians cling to it as a convenient refuge. Ptomain is a term for chemical substances of uncertain origin, unknown nature, and doubtful existence.

The New Revenue Law imposes a tax of one cent on each ten cents, or fraction thereof, paid for soda water or other soft drinks, ice cream, ice cream sodas, sundaes, etc., when sold for consumption in or in proximity to the place of business where sold. This provision becomes effective May 1, 1919.

It also provides for a manufacturer's tax of 15 per cent upon all beverages made in whole or in part from cereals or substitutes therefor, containing less than one-half of 1 per cent of alcohol, when sold in bottles or other closed containers; also a manufacturer's tax of 10 per cent upon unfermented grape juice, ginger ale, root beer and similar articles, with a tax of 2 cents a gallon, to be paid by the producer, bottler or importer, upon all natural mineral or table waters when sold by the producer or bottler at more than ten cents a gallon.

The proprietary medicine tax is changed from a manufacturer's tax of 2 per cent to a consumption tax of 1 cent on each 25 cents or fraction thereof when sold at retail, and becomes effective May first.

The new tax upon dealers in narcotic

drugs becomes effective July 1, 1919. The new tax upon narcotic drugs in original packages, as well as the amendment to Section 6 of the Harrison law, requiring the keeping of records of all exempted preparations, becomes effective the day following the passage of the act.

The revenue tax for physicians, licensed to administer narcotics, is raised from $1.00 to $3.00 annually, the increased fee being required by April 1, 1919.—*Texas State Journal of Medicine*, March,, 1919.

Surgery

LUMBAR PAINFUL POINT WITH APPENDICITIS

Brun has had a number of cases of acute appendicitis in which the pains and contracture were more pronounced in the inferior lumbar region than in front. The appendicitis was retrocecal in these cases. This form is more common in children than in adults. The painful point in the lumbar region should be sought with care in conditions suggesting appendicitis, especially when there is not much to be noted in front. He has found this painful point in 30 per cent of his cases. It is located above the middle portion of the right iliac crest. The maximum intensity is in the outer angle of the triangle of Petit. There may be contraction of the muscles of the posterior wall, and comparison with the left, sound side is instructive. These findings not only reveal appendicitis which might otherwise escape recognition, owing to the negative findings in the iliac fossa, but they also guide the surgeon to the most convenient mode of access to the appendix.

NOTES ON TWO SIGNS IN CHRONIC APPENDICITIS

Dr. Robert T. Morris, of New York City, states that two signs belonging to the sympathetic and autonomic nervous systems were of prime importance in making a differential diagnosis between chronic appendicitis and other affections of the abdomen and pelvis. These two signs did not belong to acute appendicitis. As a result of the chronic irritation of the appendix, impulses were registered upon the second and third right sympathetic lumbar ganglia known as the fused ganglion in such a way that it became hyperesthetic. Deep pressure upon the abdomen about an inch and a half to the right of the navel and a trifle caudal brought out this hyperesthetic point which constituted one diagnostic sign of importance in differential diagnosis. The other sign consisted in permanent distension of the ascending colon. It was what he called the cider barrel sign. Percussion upon the normal left side of the abdomen brought out a note suggestive of the cider barrel in October and percussion over the right side of the distended ascending colon brought out a percussion note suggestive of a cider barrel in March. This chronic disturbance of the ascending colon was apparently caused by exhaustion of its sympathetic innervation due to chronic nagging from the irritated appendix.

THE STANDARDIZATION OF RURAL HOSPITALS

Dr. Isaac S. Stone, of Washington, D. C., is in favor of bringing the standard of all hospitals, whether large or small, up to that point which would afford the best service to the public and which would require the best medical and surgical training of the staff. Sufficient information had been collected to show the number of poorly equipped hospitals in perhaps all parts of the country in towns and rural districts. Many of these were but little better than boarding houses, without the essential equipment

of house staff or laboratory, or indeed, anything which justified the name of hospital. It was suggested that all hospitals should be inspected by the health officer or commissioner of health, whether they were public or private institutions, and in case they were found up to the standard of requirement they should be duly licensed and required to send in a full report of the treatment of all cases during each year. The writer also favored state aid to rural hospitals when necessary, to provide hospital relief in country or remote outlying districts. Especial attention was given to consideration of rural hospitals as social service centers and for the care of obstetrical patients whose homes were remotely situated or who were unable to obtain competent professional attendance.

SOME POINTS ABOUT BONE GRAFTS

Wheeler's opinions as to the inherent value of the bone grafts are, in general, in accord with the views held by others. He believes that the periosteum should be left on the graft, because, although not essential, it is the medium through which new blood vessels enter the graft and the surrounding structures. Furthermore, in removing the periosteum superficial layers of osteoblasts may be sacrificed. A periosteum covered graft is less likely to become absorbed rapidly. As to what type of graft is to be used in certain cases, Wheeler says that in the case of the humerus and femur, long stout inlay grafts give the best results. Sliding grafts should only be employed in simple and fresh cases. But for slightly slower osteogenic powers, and a real tendency to fracture, the intramedullary peg is effective. This method of bone grafting is satisfactory in the case of the radius and ulna.

BENZYL ALCOHOL, A NEW LOCAL ANAESTHETIC

As a result of research work by Dr. David L. Macht of the Pharmacological Department of Johns Hopkins University, a new local anaesthetic was discovered which is about forty times less toxic than cocain. This we have noted under the head of Medicinal Remedies as having been accepted by the Council on Pharmacy and Chemistry in October last under the name of benzyl alcohol, or phenmethylol. The discovery was made in connection with experiments on the action of benzyl benzoate, a substitute for opium, which counteracts spasms of the internal viscera. A drop of benzyl alcohol was found to completely anaesthetize the tongue. Experiments on lower animals have been so satisfactory that its use was commenced at Johns Hopkins Hospital. Full reports as to its value as a local anaesthetic have not yet been issued.—*Tex. State Jour. Med.*

A SUMMARY OF THE SURGICAL TREATMENT OF GOITER

By MILES F. PORTER, M.D., F.A.C.S., Ft. Wayne, Ind.

Read before the Southern Surgical Association, Baltimore, December.

Generally speaking, surgical services are sought by goiter patients, because of (1) toxic symptoms, (2) pressure symptoms, (3) deformity, and (4) a combination of these difficulties.

When patients with symptomless goiters seek the services of the surgeon for fear their benign goiters may become troublesome, and not until then, will there be achieved all that is possible in the relief and cure of this disease.

I should like to repeat here what I have said in effect several times before,*

namely, that the wisdom of removing simple goiters for fear of their becoming toxic is quite evident as is the wisdom of removing warts, moles, scars, etc., for fear of their becoming malignant. Subtotal thyroidectomy is the operation of choice in all patients who are good surgical risks. "Safety first" is the slogan here as universally elsewhere and, therefore the incision should be ample and located with a view to an adequate exposure of the gland. Whether or not the muscles should be divided on one or both sides depends upon the individual case. The rule should be to divide the muscles when necessary to secure adequate exposure of the operative field. When divided, the section should be made as near the upper attachment as possible. It is preferable to grasp all the tissues, including the superficial fascia and muscles on the side or sides to be divided with two forceps and make the incision between. Properly placed sutures will coapt all structures divided and effectually prevent hemorrhage.

For circumscribed hypertrophy, cysts or adenomata, the incision may with safety be made relatively small, provided it be properly located. There is no orthodox incision for goiter.

In cases of general hypertrophy wherein subtotal removal is contemplated, a full exposure of the gland should be secured not only for the sake of safety, but for the further purpose of enabling one to judge more accurately of the characters presented by the different parts of the gland. In a previous paper† I called attention to the fact that the hyperactive portions of the gland could usually be distinguished from the normal or inactive portions. It is generally believed, I think, that the hyperactive gland structure is usually red, rather firm, and somewhat resembles beef steak. On the contrary, it has been my observation in quite a number of cases, that the hyperactive, trouble-producing portion of the gland, as indicated by the microscopic picture present, is often, if not usually lighter in color and softer than the normal gland structure. Further observations made since those above referred to were based, confirm the conclusions reached therein.

With the style of dress commonly worn by women today, it is quite impossible to locate the incision so that the scar will be covered. It follows, therefore, that the scar should be as inconspicuous as possible. To achieve this end, the incision should be made to follow the natural folds of the skin, the skin should be cut through at right angles to the surface, and the skin wound should be closed with subcuticular sutures with the aid of adhesive plaster, if necessary, to perfect the coaptation. A stitch scar in a place where it attracts attention is a surgical sin. No other method of wound closure with which I am acquainted gives as good medical results as the one here recommended.

Lobectomy is frequently an unsatisfactory operation in that it leaves the neck asymmetrical and often fails to give adequate relief.

The portions of the gland structures to be left after thyroidectomy should be selected, in so far as is possible, with a view of avoiding future asymmetry. One should leave not any more gland structure than would amount to one-fifth the normal—the aim should be to leave normal gland tissue. Non-functionating gland tissue is useless, and hyperplastic tissue, if left, will keep up the symptoms of intoxication for a longer or shorter time, and sooner or later degenerate and become useless. That it will not always be possible to select normal tissue to leave

I am of course well aware, but I am convinced that efforts made along this line are well worth while.

It is, perhaps better always to divide the isthmus completely when it can be done without additional risk. This propedure is advised with a view to the belief or prevention of the pressure symptoms. Preservation of the posterior capsule will effectually protect the parathyroids and recurrent laryngeal nerves. Drainage adds both to the safety and comfort of the patient and it is, therefore, seldom wise to omit it. Strips of rubber dam make the best drainage material. Drains should be removed as soon as the discharge becomes neglible, usually at the end of 48 or 72 hours after the operation.

Adhesion of the skin to the larynx or trachea is not an infrequent cause of annoyance. This can be avoided by securing the interposition of a layer of cellular tissue between these structures.

Generally speaking, ether anesthesia is the safest and most satisfactory. To this rule there are of course, exceptions, but they are rare. It is generally conceded that when a patient dies from appendicitis it is almost always because someone has blundered. The sooner it is generally conceded that it is a grievous error for a goiter patient to put off consulting the surgeon until the time for safe surgery is past, the sooner will the number of goiter deaths be decreased. In the present state of our knowledge concerning goiter there is no excuse for any but a very small proportion of goiter patients first seeking surgical relief after the time for safe surgery is past.

For the preparation of the sub?standard risks for the major operation, injections of boiling water into the gland substance is more effectual than any other known procedure. In a large percentage of patients with small goiter of the diffuse hyperplastic variety, injections of boiling water should be the treatment of choice in that it is efficacious and entails less risk and less loss of time than any other method of treatment equally efficient. This method of treating goiter has already been published.‡ It is now in quite general use and a detailed presentation of the subject is unnecessary.

In closing I should like to urge the especial importance of foci of infection in goiter patients. Not infrequently the removal of these foci will cause the goiter symptoms to disappear. To allow such foci to remain after thyroidectomy is to invite a recrudescence of the goiter symptoms. Besides it should be remembered that thyroidectomized patients are especially vulnerable.

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*Detroit M. J., 1915, March.
†Ann. of Surg., Phila., 1916, October.
‡Surg., Cynec. & Obst., 1915, xx, 15.

Advertisers' Announcements

UNITED STATES FEDERAL TRADE COMMISSION DISMISSES COMPLAINT FILED AGAINST THE VICTOR ELECTRIC CORPORATION LAST JUNE.

At a regular session of the United States Federal Trade Commission held in Washington, D. C., March 10, 1919, the complaint against the Victor Electric Corporation was ordered dismissed and discontinued. We congratulate the officers and members of the Victor organization on this vindication.

The personnel of the Victor organization is largely made up of pioneer workers in the X-ray and physical therapy field and we have always believed that these men (who are directing the policies of the Victor Electric Corporation), have been actuated by a desire to elevate

rather than to lower the standard of business ethics in their field.

The Victor Corporation is to be congratulated upon having had this opportunity of having the Government searchlight turned upon its activities, and the clean bill of health which the corporation has received should be an inspiration to its officers to continue to be guided by those ideals which should be kept in constant view by all who are engaged in an industry so closely allied to medical science.

The doctor should always have an hemostatic in his case. There is liable to be need for it any minute.

Thromboplastin Solution (Armour) is a specific hemostatic and acts promptly.

Thromboplastin (Armour) is made from the fresh brain of kosher killed cattle. There is a certain amount of that blood clotting thing in an animal's brain and this is not used up when the animal's throat is cut. It is used up when an animal is killed with a hammer. In the Armour Laboratory kosher killed cattle brain is used in making Thromboplastin. That's why Thromboplastin Solution (Armour) works promptly.

The Physicians' and Surgeons' Adjusting Association, of Kansas City, wishes to call the attention of physicians in the field to the fact that they do collect old accounts. This Journal has accepted their advertisement, which will be found on another page of this issue, and any business transacted with this company will no doubt be entirely satisfactory to those who have dealings with them.

DOBELL'S SOLUTION

Somebody (God forgive him!) recommended spraying of the nose and throat with Dobell's Solution as a prophylactic for Spanish influenza. Apparently every newspaper in the United States has printed this suggestion.

Dobell's Solution is of such slight value as an antiseptic that we fell it our duty to warn the profession against putting their faith in it. As every doctor knows, this is a weak alkaline solution, containing borax and bicarbonate of soda, in a little glycerin and much water, rendered feebly antiseptic by the addition of three parts per 1,000 of phenol; in other words, it contains 1-3 of 1 per cent of carbolic acid. The only value a solution of this kind could have would be for the removal of mucous secretions from the nose. For this purpose it might have some slight merit.

As an antiseptic, however, Dobell's solution is a joke. Such a solution is not equal in antiseptic power to one made by dissolving one Chlorazene tablet in *five quarts of water.*

When people are using antiseptic solutions to prevent a terrible disease like Spanish influenza, they want something which is really of value. It is criminal to advise them to put their faith in a preparation like this, when really powerful germicides like Chlorazene can be obtained at almost any drug store.

Book Reviews

THE WASSERMANN TEST

By Charles F. Craig, A. M. (Hon.), M. D., (Yale), Lieut.-Col. Medical Corps, U. S. Army; F.A.C.S.; formerly Asst. Professor of Bacteriology and Pathology, Army Medical School and George Washington University. Commanding officer Department Laboratory, Central Department, U. S. Army, Fort Leavenworth, Kansas. Published with authority of the Surgeon-General, U. S. Army. Il-

lustrated with colored plates, half-tone plates and fifty-seven tables. St. Louis, C. V. Mosby Co., 1918.

While the value of the Wassermann Test cannot be computed, its nature still remains a mystery, notwithstanding the numerous and ingenious theories advanced in explanation, nearly all of which have been exploded from time to time. All this, however, can not detract from the interest and value of Colonel Craig's book. For those desiring to make the test for themselves, a convenient list of apparatus and instructions for the preparation and titration of reagents used is found in Chapter IV. One might reasonably suppose that antigens prepared from pure cultures of Treponema Pallidum would be of greatest value in conducting the test, but exactly the opposite has proved to be the case. The many factors influencing the results of the test are taken up and discussed in a separate chapter. The many modifications of the test are taken up and discussed in a fair and impartial manner. Results of the test in various stages of the disease are noted and the interpretation of these results as a control in treatment is made. The test of the cerebro-spinal fluid is explained and an interpretation of the results made. The book is a lucid, safe and reliable guide to all that is considered of value in our present day knowledge of the syphilitic condition.

ROENTGENOTHERAPY

By Albert Franklin Tyler, B. Sc., M. D., Professor of Clinical Roentgenology John A. Creighton Medical College; Attending Roentgenologist St. Joseph's Hospital, Bishop Clarkson Memorial Hospital, Ford Hospital, Emmanuel Hospital, Douglas County Hospital and Lord Lister Hospital, Omaha, Nebraska; Member American Roentgen Ray Society; Fellow American Medical Association, etc. 111 illustrations. St. Louis, C. V. Mosby Co., 1918. Price $2.50.

The object of the author of this little book is to supply the apparent want of a reliable text to beginners in Roentgenotherapy. In this we think he has succeeded admirably. It is printed in good type on excellent paper, profusely illustrated with beautifully executed cuts. An introductory chapter is followed by a chapter describing the necessary apparatus. Superficial and deep therapy and the condition to which applicable are next taken up, with a short chapter on malignant growths following. The rest of the book is taken up with an interesting series of case histories, clearly illustrated. A bibliography and index completes this work of much value and interest to the general practitioner and the beginner in Roentgenotherapy.

A TEXT BOOK OF OBSTETRICS

By Barton Cooke Hirst, A.B., M.D., LL.D., F.A.C.S., Professor of Obstetrics in the University of Pennsylvania; Gynecologist to the Howard, the Orthopedic and the Philadelphia General Hospitals. Revised and reset, eighth edition; 715 illustrations, 38 in colors. Philadelphia and London. W. B. Saunders Co., 1918. Price $5.00.

This is so near an universally used text book that any detailed notice would seem to be a work of supererogation, an attempted gilding of a sunbeam as it were. A frequently issued new edition of any text book is a distinct advantage to its readers as it then enables the author to keep abreast of the times in the dissemination of the latest discoveries and theories relating to the subject matter. The author's successful attempts at condensation of text without sacrificing clearness, the omission of much unessential and obsolete matter, which so frequently clutters up our text books,

and the addition of all the new teachings which seem to be of permanent value adds greatly to the usefulness of the work.

ROENTGEN DIAGNOSIS OF DISEASES OF THE HEAD.

By Dr. Arthur Schuller, head of the Clinic for Nervous Diseases at Franz-Josef Ambulatorium, Vienna. Authorized translation by Fred F. Storking, M. D., M.R.C., with a foreword by Ernest Sachs, M.D., Associate Professor of Surgery in Washington University. Approved for publication by the Surgeon General of the United States Army. The C. V. Mosby Co., St. Louis, 1918. Price $4.00.

The wide experience and opportunity for extensive clinical observation of the author, entitles the statements therein to respectful consideration. The information contained may be considered fresh, and will, no doubt, prove of value to the interested in this very important, but undeveloped subject.

PATHOLOGICAL TECHNIQUE

The New (7) Edition.

A practical manual for workers in Pathological History and Bacteriology. Including directions for the performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By F. B. Mallory, M.D., Associate Professor of Pathology, Harvard Medical School, and J. B. Wright, M.D., Pathologist to the Massachusetts General Hospital. Seventh edition, revised and enlarged. Octavo of 555 pages with 181 illustrations. Philadelphia and London. W. B. Saunders Co., 1918. Cloth $3.75.

The appearance of this, the seventh revised and enlarged edition of this manual may be regarded as proof of the worth of the book, and of its popularity with the profession. Of the valuable additions made to this edition may be mentioned Goodpasture's and polychrome methylene-blue stain for frozen sections of fixed tissues, etc. Graham's oxide stain for the granules in the myeloblastic series of cells and leukocytes; Renian's Congo red method for demonstration of the spirochetes. Clandin's stain for flagella and the approved method of classifying pneumococci with reference to the serum treatment. In the introductory chapter an efficient laboratory outfit is described. The formula and the technique for the preparation of all the most used and dependable, as well as many of the more rarely used and newer stains and methods are fully described so that even the tyro can scarcely go astray. Specific direction for all the preparations and manipulations thereof for the Wassermann and Noguchi, with Wright's modification of Wassermann's methods for the serum diagnosis of syphilis are given. At the conclusion of the book full instructions for conducting post-mortem examinations will be found. It is fairly well illustrated and merits unqualified approval as a practical manual for workers in pathological histology and bacteriology.

SURGICAL TREATMENT.

A practical treatise on the Therapy of Surgical Diseases for the Use of Practitioners and Students of Surgery. By James Peter Warbasse, M.D., formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, New York. In three large octavo volumes, and separate Desk Index Volume. Volume III contains 861 pages with 864 illustrations. Philadelphia and London. W. B. Saunders Co., 1919. Per set (three volumes and the index volume) : Cloth, $30.00 per set.

In our notice of the initial volume of this great one-man work we said, "If this volume is any indication of the value of those to follow, the profession may

well feel that a great and desirable task has been accomplished." We now feel fully justified in stating that our expectations thus aroused are more than fully realized. In Volume II, which contains 829 pages, with 761 illustrations, we find taken up the surgical treatment of injuries and diseases of the scalp, skull, spine, neck, eye, ear, naso-pharnyx, larnyx, trachea, mouth, ear, thorax and contained organs, the breast and abdomen, about 300 pages are taken up in consideration of latter subjects. Each of these organs is taken up under a general head and the subjects of injuries. diseases and treatment practically and concisely covered. Of course a lot of unnecessary speculation and details must be left out, but this is so skillfully done as to not detract from the value of the work to the surgeon and general practitioner.

Among the subjects of most importance considered in Volume III will be found the hernias, rectum and anus, vermiform appendix, liver and gall bladder, genito-urinary organs, female generative organs, upper and lower extremities, amputation, plastic and cosmetic surgery, injuries from electric currents, radiation and gas poisoning, first-aid to injured, sixty pages profusely and beautifully illustrated on bandaging, a useful appendix and an index of subjects. An unusual feature accompanying the work is a complete desk index which adds greatly to the convenience and comfort of the perusal of this unique and valuable work.

Announcements and Communications

March 27, 1919.

Dr. J. Howard Anderson,
Marytown, W. Va.

Dear Doctor:—

The Committeeon Arrangements for the state meeting wishes to report that the Waldo has been selected as headquarters where arrangements have been made for the meetings of the general sessions, the two sections, the house of delegates and the council. The assembly room on the top floor will seat several hundred and can be used for the general sessions and either the medical or surgical section. Here we could provide for the use of a stereopticon and the section having illustrated papers should use this room. The American dining room will accommodate the other section.

In the parlor the delegates and council can meet.

If the program makes provision for a public meeting when a large auditorium would be desirable, we will secure the Masonic Temple or the M. E. Church. If you wish such arrangement made please notify us.

The commercial exhibits will be handled by Mr. Woodell of the Waldo directly. If we had the names of the firms which usually have exhibits we would notify them.

We hope to secure Rev. E. B. Turner for the invocation and Judge Haymond Maxwell to give address of welcome for the county. Since both are out of town I cannot speak positively, but these functions will be provided for.

By having the management of the Waldo to keep others away at that time we hope to have accommodations for most of those in attendance there, but it is highly desirable that all those expecting to attend write for reservations. We would suggest that the secretaries of the societies be requested to call this matter to the attention of their members.

As is customary, a banquet will be held on Thursday evening. Since we have nothing else of an entertaining nature to offer the Association, we will try to make this interesting.

Dr. B. F. Shuttleworth, President of the County Society, will welcome the Association in the name of the society at the opening session.

Let me ask again that we be notified of the need of a stereopticon, or of an auditorium for a public meeting, and that the necessity for reservations at the hotel be impressed on those expecting to attend.

Have you any further suggestions or requests?

Fraternally,
H. E. SLOAN.

Charleston, W. Va.,
April 11, 1919.

You know, of course, the Victory Loan Campaign will be inaugurated April 21, continuing for a period of three weeks; that the apportionment for West Virginia will be substantially the same as in the Fourth Loan campaign, and that earnest, vigilant and patriotic efforts must be made if West Virginia is to meet her quota.

After the war is finished, the tendency is to quit. This is the view of unthinking, but how can we quit? We owe the money. It has been expended, much of it eight months ago. This expenditure was to put our sons on the battlefield and this money was sunk in the blood-soaked fields of France. It furnished our soldiers clothes to wear, food to eat, arms to carry, ships for their transportation and cannon for warfare. It is an obligation which we have got to meet. No consideration of waste or politics can intervene. It is an obligation of our government which must be met.

How shall we meet it? By taxation or buying bonds? If the bonds are not sold, it must be met by taxation. Are you able to stand further taxation? Therefore let us sell the bonds. Shall they be sold to the banks or the people? If sold to the banks they will overload the banks, stop the resumption of business and interfere with the channels of commerce. Therefore, they must be sold to the people.

Are the people able to carry them? The country never was in such splendid financial condition as at present. The resources of the National banks were, on November 1, $20,000,000,000. This was a new high record and also an increase of $1,800,000,000 over August 1. The resources of the National Banks exceed the combined resources of the National banks of the rest of the civilized world. The resources of the state and other banks and trust companies is $1,000,000,000 more than the combined resources of the National banks. The growth of the resources of the National banks in the past five years is greater than the increase which has taken place in the last 25 years.

What of the small depositor and wage earner? The Savings Banks for January, February and to the 15th of March show the greatest record in their existence and in that time the deposits have been greater than in any one year of their history.

What of West Virginia? The deposits in our state banks on November 20, 1917, were $123,966,000. A year later, in November, 1918, the deposits were $124,697,000, and on March 4, 1919, these deposits had increased to $133,905,000, an increase of $9,208,000 in a period of four months. There never has been such prosperity in West Virginia, and there never has been so much money in her banks.

Therefore it is our duty, and easily our ability, to put this loan over. Suppose West Virginia, of all the states in the Union, should fail to raise her quota. It would make every West Virginian

bow his head in shame and blush when the name of his state is mentioned. The same patriotic impulse that sent our boys to war to uphold the great ideas of civilization and humanity, should impel us today, and it is our duty to our country, to humanity, to our soldiers, dead and living, to carry this loan as triumphantly as we have in the past.

We have now got to make sacrifices. We have not had to make any heretofore. I am engaged in this Liberty Loan campaign at great personal sacrifice, and I ask the same sacrifice of time and energy be made by you. All data of every kind will be furnished you; all material necessary will be forwarded to you; and now is the time to prepare for the organization of this great campaign which will only last three weeks from its beginning to its completion.

Let me ask you, earnestly and sincerely to get behind your county loan organization and do not stop until we have been successful.

Very sincerely yours,
W. A. MACCORKLE,
Chairman State Liberty Loan Committee.

New Orleans, La.
March 19, 1919.

Dr. J. R. Bloss, Editor,
Editor W. Va. Med. Jour.,
Huntington, W. Va.

Dear Doctor:—

The American Public Health Association will hold its next annual meeting in New Orleans, October 6-9, 1919.

The executive committee has already begun preparations to make this a banner meeting. With this end in view we take the liberty of asking your co-operation to make it a great success.

The south should have a large representation and we feel you could materially help in this direction by giving the announcement of the meeting a prominent place in your columns.

Thanking you in advance for any assistance you may give us, I am,

Fraternally yours,
Chairman Publicity Comm.

March 29, 1919.

From: Chairman Gen. Med. Board,
Council of Nat. Defense.
To: The Editor.
Subject: Termination of War Activities of the General Medical Board and its Committees.

1. We are enclosing a statement relating to the termination of the war activities of the General Medical Board and Medical Section of the Council of National Defense, including text of letters sent by the Secretary of War to each of the members of the General Medical Board, and by the chairman of the General Medical Board to the members of the State and County Committees.

2. We will appreciate your using this material in your next issue, believing your readers will be interested in the letters.

3. Permit me at this time to thank you for your co-operation in publishing matter sent to you from this office from time to time during the last two years. The medical press has been of great assistance in making known to the doctors of the country the numerous matters in which the General Medical Board, as a governmentally constituted agency, sought the help and interest of the profession.

Yours truly,
FRANKLIN MARTIN,
Chairman Gen. Med. Board.

In view of the termination of the war activities of the General Medical Board and Medical Section of the Council of National Defense, Secretary of War Newton D. Baker, who, as chairman of the Council, appointed the members of the

General Medical Board, has written a personal letter to each of the seventy-five prominent physicians and surgeons comprising the board, expressing appreciation for their services and thanking them on behalf of the government. Dr. Franklin Martin, Chairman of the General Medical Board, has also written thanking the members of the state and county committees which for two years have worked under the direction of the board.

"In terminating the relations between these organizations and the officials with whom they co-operated and worked so effectively," said Dr. Martin, "while one cannot complain that the war is over, yet a feeling of regret must inevitably arise at the severing of such close connections engendered by the friendship and comradeship that are the natural outgrowths of such important associations.

Secretary Baker's letter:

WAR DEPARTMENT
WASHINGTON

My Dear Doctor:—

Dr. Franklin Martin advises me that the work of the General Medical Board of the Advisory Commission of the Council of National Defense is now nearing completion and that the board will be dissolved on April 1.

I cannot permit the occasion to pass without expressing my grateful appreciation of the work which you have done and the singleness of spirit with which your associates and yourself have devoted themselves to the great work which was placed in the hands of the General Medical Board of the Council of National Defense. While it would be invidious to make any appraisal of the work of your board in comparison with that of any other agency organized in the emergency, I need not, I know, assure you that the government appreciates deeply and genuinely the great and essential contribution which has been made by the Medical Board in the mobilization of the civilian profession, its classification as to specialties and fitness, and in the preparation and organization of information which would enable the department to secure from the manufacturers of the country the vitally necessary instruments and supplies for the medical care and attention of our men in the field.

Since the cessation of hostilities the work of the board has been rounded out to completion. I beg you to accept for yourself and your associates this expression of my deep appreciation of the service which you have rendered to the country.

Cordially yours,
NEWTON D. BAKER,
Secy. of War.

Dr. Martin's letter to the members of the State and County Committees:

COUNCIL OF NATIONAL DEFENSE
WASHINGTON
March 25, 1919.

From. Chairman, Gen. Med. Board,
Council of National Defense.

Subject: Termination of War Activities.

Upon the signing of the armistice on November 11, 1918, the strenuous war time activities of the committees of the Medical Section of the Council of National Defense automatically ceased. As the unfinished business in the hands of the committees at that time is now approaching completion, you are hereby notified of the termination of your war duties as a state committeeman on April 1, 1919.

Not until the history of our part in great war is written will the people realize the important role the medical profession of the United States played in making our country a deciding factor in winning the war. Do you realize that in the year before our entry into the conflict the commissioned officers in the Medical Department of the Army and Navy

numbered less than five hundred in each service and that practically 40,000 civilian doctors had been added to these two corps by the time hostilities had ceased? When the story is told of the enrollment of these thousands of doctors, it must give the largest credit to our many state and county committees who labored so patriotically and continuously to carry out the recommendations of the organization under which they worked, the Council of National Defense, and thus aided the administrative departments of the Surgeon General of the Army, the Navy, the Public Health Service and the Provost Marshal General.

The work of these committees under the direction of the General Medical Board had to do with activities of which the following is a brief summary: Recruiting medical officers, standardization of medical and surgical supplies; cooperation in controlling venereal diseases; mobilizing five thousand dental surgeons; establishing committees on hygiene, sanitation, general surgery, orthopedic surgery, ophthalmology, otology, rhinology, and laryngology, general medicine, nursing, women physicians and medical schools; organizing medical advisory boards; the study of industrial medicine; securing through legislation increased rank for reserve medical officers; and finally, individual classification of the members of the profession through the medium of the Volunteer Medical Service Corps.

I want you to know that those of us who have had the responsibility of organizing and enrolling the medical profession and resources appreciate the value of your work and thank you for it from the bottom of our hearts. This includes the Secretary of War who presides over the Council of National Defense, the Secretary of the Navy, who is one of its members, and the President of the United States, who appointed the Council and on two occasions has said, in speaking of our state and county committees: "Will you not be kind enough to convey to them a message of sincere appreciation from me of their services as authorized governmental agencies? * * The health of the Army and the Navy and the health of the country at large is due to the cooperation which the public authorities have had from the medical profession."

Finally, in sending this communication to you after our two years of stressing work together, I want to thank you personally for your ever prompt response to my calls for help and for the evidence you have always shown me of your loyalty, fidelity and friendship.

Yours very truly,

FRANKLIN MARTIN,
Chairman Gen. Med.
Board, Council of Nat.
Defense.

The Council of National Defense authorizes the following:

Characterizing the work of the Volunteer Medical Service Corps and the Medical Section of the Council of National Defense as "a very striking demonstration of the American spirit," Dr. Edward P. Davis, president of the corps, paid tribute to the patriotism of American civilian doctors at the final meeting of the Central Governing Board of the Corps held in Washington March 14, prior to the termination of its war time activities, April 1.

A report submitted at the meeting showed that nearly 70,000 applications have been received from physicians for membership in the corps, of which 56,540 had been received and coded prior to the signing of the armistice, November 11, 1918. Qualifications of these civilian doctors, classified and coded on cards, will be placed in the library of the Surgeon

General of the Army, where they will be accessible to all governmental departments for all time to come. With the approximately 40,000 medical officers additional, who are in the Army, Navy and Public Health Service, practically all the able-bodied, eligible doctors of the country will be listed, available for the nation's needs. Usually there are said to be about 150,000 physicians in the United States, but this total includes a large proportion of superanuated, disabled or ineligible.

Dr. Franklin Martin, chairman of the General Medical Board of the Council of National Defense, expressed his warm appreciation of the co-operation he has received from the medical profession of the country and his firm belief in the value of the records of the Volunteer Medical Service Corps.

Dr. Davis said, in part: "This Volunteer Medical Service Corps and the work of the Medical Section of the Council of National Defense has been a very striking demonstration of the American spirit in more ways than we have imagined. I have always thought of a remark made by the President when the whole thing was in full swing, just about the time the nation had gotten its stride. He said that the men who were staying in this country were having the hardest time. That was true. You take the medical men who actually went into service. Of course some of them did office work in Washington, but the men whom I know who have been in the camps here —whether they got to Europe or not— say they have had the time of their lives.

One man, my assistant, said: "I am just coming back from a year's freedom from responsibility, except for the immediate performance of my duties! Another man, who is probably the best X-ray man in the Army, said his career in the Army has been the happiest time he has ever known, because he has worked scientifically without interruption. They had the privilege of being free of concentrate their minds on duty, and I think the remark made by Dr. Studdiford in New York the other night is to the point— that there has not been in the past year in the practice of medicine in the United States one single easy, pleasant, satisfactory thing. He said he hoped he would never have to live to go through another such year.

"When you consider the burden thrown upon the profession of this country by the shortage of resident membership, taking away assistants, nurses, laboratory men; the influenza epidemic, with the consequent increase in morbidity and mortality, and the strain upon the population which is now showing itself—it has been a most hectic war season. I don't think any profession has met a similar crisis in civilization as nobly as did the American profession, and no small part of the moral value and success of the profession was due to this corps. The fact that we had a corps where the men could record themselves who did not go to the front had an enormous moral value.

..."I personally desire to testify to the pleasure it has been for me to do what I have done. And I have sincerely appreciated the honor which has been given to me."

To about 13,000 doctors whose applications for membership in the Volunteer Medical Service Corps had been received before the armistice was signed but which had not been acted upon by their state committees, now dissolved, Dr. Davis is sending the following letter:

From: Volunteer Medical Service Corps.
Council of Nat. Defense.
To: Applicants for membership.

1. With the cessation of hostilities subsequent to the signing of the armis-

tice, the Council of National Defense, under which the Volunteer Medical Service Corps was organized, asked that the activities of that corps be terminated, and Surgeon General Ireland of the Army requested that the valuable records of the corps be given place in the library of the Surgeon General where they will be maintained permanently for reference by the various government bureaus.

2. Your application for membership in this corps, we regret to say, was not acted upon by your state and county committees before those committees were automatically released and, therefore, we are unable to complete your membership by furnishing you with the visible evidences of your tender of service, viz., the insignia and certificate of the corps. We wish you to know, however, that your patriotic offer of service to your government has been received and your qualifications as outlined on the Volunteer Medical Service Corps application blank have been transferred to permanent code cards which are to be preserved as an important record of the war.

3. We also wish you to know that those of us who have had the responsibility of organizing and enrolling the medical profession of the country appreciate the value of your offer of service and thank you for it from the bottom of our hearts. This includes the Secretary of War, who presides over the Council of National Defense which authorized the Volunteer Medical Service Corps, the Secretaries of the Navy, the Interior, Agriculture, Commerce and Labor, the members of the Council, and the President of the United States who appointed the Council of National Defense and who definitely approved the Volunteer Medical Service Corps in the following words: "I am very happy to give my approval to the plans which you have submitted, both because of the usefulness of the Volunteer Medical Corps and also because it gives me an opportunity to express to you, and through you to the medical profession, my deep appreciation of the splendid service which the whole profession has rendered to the nation with great enthusiasm from the beginning of the present emergency."

4. Finally, may I express to you on behalf of the Central Governing Board of the Volunteer Medical Service Corps its personal thanks for your generous response to its request for an offer of your services at a time when it apepared they would be so urgently needed by the nation.

EDW. P. DAVIS, M. D.,
Pres. Volunteer Medical Service Corps.

March 31, 1919.

West Virginia Medical Journal,
Huntington, W. Va.

Gentlemen:—

We are enclosing certain news items which we feel may be of interest to your readers, especially to those who may desire to avail themselves of our financial assistance in the carrying out of their special problems of research.

We are enclosing a copy of the regulations governing our scientific research fund, which defines the conditions under which these institutions are eligible to participate.

Sincerely yours,
T. A. STOREY, Ex. Secy.,
Inter-Departmental
Social Hygiene Board,
1800 Virginia Ave,
N. W.

REGULATIONS GOVERNING THE SCIENTIFIC RESEARCH FUND*

The United States Interdepartmental Social Hygiene Board prescribes the following rules and regulations in conform-

ity with that part of section 6, chapter XV, Public 193, 65th Congress, which provides that the sum of $100,000 "shall be paid to such universities, colleges, or other suitable institutions as in the judgment of the Interdepartmental Social Hygiene Board are qualified for scientific research for the purpose of discovering, in accordance with the rules and regulations prescribed by the Interdepartmental Social Hygiene Board, more effective medical measures in the treatment and prevention of venereal diseases."

1. Appropriations from this fund will be made only to universities, colleges, or other suitable institutions that give satisfactory evidence of possessing a staff of scientific experts and an equipment of scientific apparatus, supplies, and resources that will guarantee that the researches undertaken will be carried out under approved scientific conditions and in conformity with scientific methods.

2. Appropriations for this fund for scientific research will be made only for definite investigations that are described by the proposers in sufficient detail to satisfy the Interdepartmental Social Hygiene Board that there is a justifiable expectation that these researches "will discover more effective medical measures in the prevention and treatment of venereal diseases."

3. The universities, colleges, or other institutions proposing researches and asking for appropriations will furnish information on the following subjects:

a. Name of institution requesting appropriation.

b. Name, office, and address of official representative of this institution.

c. Title concisely descriptive of research proposed.

d. Laboratory in which research is to be carried out.

e. List of more important scientific publications from this laboratory.

f. Name and concise statement of the scientific training of the laboratory chief or director, or other individual responsible for the scientific policy of the laboratory.

g. Laboratory staff, giving names, degrees, etc.

h. Laboratory equipment and facilities, with a concise statement indicating scientific and working capacity of the laboratory, and co-operating laboratories, departments, and agencies.

i. Description of research proposed; outline plan in sufficient detail to show clearly its scientific character and justify the expectation that it will discover "more effective medical measures in the prevention and treatment of venereal diseases." Include references to important scientific literature bearing on research proposed.

j. Probable cost. Give general items covering the necessary equipment and supplies, with an estimate of the probable cost of preparing and printing a report. Should not include the salaries of scientific investigators, but may include salaries for technical assistants.

k. Will this institution be able to carry on the research proposed if it receives no financial aid from the Interdepartmental Hygiene Board?

4. Universities, colleges, and other institutions asking for appropriations, wil furnish the board with a budget made out on forms supplied by the board and will make an accounting of their disbursements in conformity with the rules of the Comptroller of the Treasury of the United States Government.

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*See section 6, chapter XV. Public No. 193, 65th Cong., Army appropriation bill of July 9, 1918.

The United States Interdepartmental Social Hygiene Board, through its Executive Secretary, Dr. T. A. Storey, 1800

Virginia Avenue, N. W., Washington, D. C., announces the following appropriations from the Scientific Research Fund of the board:

LELAND STANFORD JUNIOR UNIVERSITY MEDICAL SCHOOL

(1) "Investigation into more effective treatment in acute and chronic gonorrhea," under the direction of R. L. Rigdon, M. D., Clinical Professor of Genito-urinary Surgery, and A. B. Spalding, M. D., Professor of Obstetrics and Gynecology, $2,300.

(2) "The permeability of the meninges to anti-syphilitic drugs—an attempt to increase their permeability," under the direction of H. G. Mehrtens, M. D., Clinical Professor of Neurology, $2,300.

(3) "Investigation into more effective methods of treating syphilis," under the direction of H. E. Alderson, M. D., Clinical Professor of Dermatology, $2,600.

Total, $7,200.

UNIVERSITY OF MICHIGAN, COLLEGE OF MEDICINE AND SURGERY

(1) "A research of an improved method of demonstrating the spirochaeta pallida in human tissues," under the direction of A. S. Warthin, M. D., Professor of Pathology, $6,000.

New and Non-Official Remedies

Tannin Albuminate Exsiccated — Merck. A compound of tannic acid and albumin thoroughly exsiccated and containing about 50 per cent tannic acid in combination. It was first introduced as tannalbin. The use of tannin albuminate is based on the assumption that the tannin would pass the stomach largely unchanged, and thus the astringent action be exercised in the intestine where the compound would be decomposed by the intestinal fluid. It is used in diarrhea, particularly that of children and in phthisis. Merck and Co., New York.

Tannin Albuminate Exsiccated — Merck Tablets, 5 grains. Each tablet contains 5 grains tannin albuminate exsiccated, Merck. Merck and Co., New York. (*Jour. A. M. A.*, March 1, 1919, p. 653).

Neoarsaminol. A brand of neoarsphenamine complying with the N. N. R. standards (see New and Non-official Remedies, 1919, p. 41). Neoarsaminol is supplied in tubes containing, respectively, 0.15 Gm., 0.3 Gm., 0.45 Gm., 0.6 Gm., 0.75 Gm. and 0.9 Gm. Neoarsaminol is manufactured under the "neosalvarsan patent" by license of the U. S. Federal Trade Commission by the Takamine Laboratory, Inc., New York.

Swan's Mixed Acne Bacterin (No. 41) —Marketed in 6 Cc. vials, each cubic centimeter containing 25 million killed acne baccilli and 500 million killed Staphylococcus pyogenes albus. For a discussion of "Acne" vaccine, see New and Non-official Remedies, 1919, p. 296. Swan-Myers Co., Indianapolis, Ind.

Swan's Pertussis Bacterin (No. 38) (Prophylactic).—Marketed in packages of three 1cc. vials, containing, respectively, 50, 100, and 200 million killed pertussis bacilli. For a discussion on pertussis bacillus vaccine, see New and Non-official Remedies, 1919, p. 287.

Swan's Mixed Furunculosis Bacterin (No. 39).—Marketed in 6cc. vials, each cubic centimeter containing 500 million killed staphylococcus pyogenes—aureus and 500 million killed staphylococcus pyogenes-albus. For a discussion of staphylococcus vaccines, see New and Non-official Remedies, 1919, p. 289.

Swan's Typhoid-Paratyphoid Bacterin (No. 42) (Prophylactic). Marketed in packages of three 1cc. vials, one vial

containing 500 million killed typhoid bacilli and 250 million each of paratyphoid bacilli A and B, while the other two vials each contain one billion killed typhoid bacilli and 500 million each of paratyphoid bacilli A and B. For a discussion on typhoid vaccine, see New and Nonofficial Remedies, 1919, p. 292 (*Jour. A. M. A.*, March 22, 1919, p. 863.)

Solargentum—Squibb. A compound of silver and gelatin containing from 19 to 23 per cent of silver in colloidal form. It is used in solutions containing from 1 to 25 per cent or more. It is also used in the form of boughies or suppositories. No precipitate is produced when sodium chlorid or albumin solutions are added to solutions of solargentum-Squibb. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Oct. 12, 1918, p. 1219).

Benzyl Alcohol.—Phenmethylol. An aromatic alcohol occurring as an ester in tolu and other balsams, and produced synthetically. It is being used as a local anesthetic by injection and by application to mucous membrane. It is said to be practically non-irritant and non-toxic in the ordinary concentration and dosage. From 1 to 4 per cent solutions in physiological sodium chloride solution are commonly used for injection anesthesia.

Phenmethylol. A nonproprietary brand of benzyl alcohol complying with the tests and standards for benzyl alcohol. Hynson, Westcott and Dunning, Baltimore, Md.

Phenmethylol Ampules, 1 per cent.—H. W. and D. Each ampule contains 5 cc. of a sterile solution of phenmethylol H. W. and D. 1 gm. in physiological sodium chloride solution 99 gm. Hynson, Westcott and Dunning, Baltimore, Md.

Phenmethylol Ampules, 2 per cent.—H. W. and D. Each ampule contains 5 cc. of a 2 per cent solution of phenmethylol H. W. and D. in physiological sodium chloride solution. Hynson, Westcott and Dunning, Baltimore, Md.

Phenmethylol Ampules, 4 per cent.—H. W. and D. Each ampule contains 5 cc. of a 4 per cent solution of phenmethylol H. W. and D. in physiological sodium chloride solution. Hynson, Westcott and Dunning, Baltimore, Md.. (*Jour. A. M. A.*, Oct. 19, 1918, p. 1313).

Pneumococcus Antigen (Rosenow), Lilly. A pneumococcus vaccine prepared by digesting a suspension of pneumococci until the bacteria are partially autolyzed. E. C. Rosenow believes that the protective power of this vaccine is greater than that of one prepared in the usual way. It is maketed in 5 cc. vials, each cc. containing 20 million partially autolyzed pneumococci. Eli Lilly and Co., Indianapolis (*Jou. A. M. A.*, Oct. 26, 1918, p. 1407).

Chlorcosane-Spibb—It complies with the standards for chlorcosane, N. N. R. Chlorcosane is a liquid, chlorinated paraffine containg its chlorine in stable (non-active) combination. It is used as a solvent for dichloramine-T and is itself without therapeutic action. E. R. Squibb and Sons, New York.

Thromboplastin Solution-Armour—An extract of cattle brain in physiological sodium chloride solution prepared according to the method of Hess. It complies with the description of Solution Brain Extract, N. N. R. As a hemostatic, the solution is applied directly to bleeding tissues or applied by means of a spray or tampon. See New and Nonofficial Remedies, 1918, p. 136 under "Fibrin Ferments and Thromboplastic Co., Chicago.

Corpus Luteum Capsules, 2 grains—Each capsule contains 2 grains of corpus luteum—Armour (see New and Nonofficial Remedies, 1918, p. 237). Armour and Co., Chicago.

Salipyrine Tablets, 7 ½ grains—Each tablet contains 7.5 grains of salipyrine (see New and Nonofficial Remedies, 1918, p. 275). Riedel and Co., New York.

Antipneumococcus Serum Type 1, Gilliland—It is marketed in vials containing 50 Cc. The Gilliland Laboratories, Ambler, Pa.

Phenylcinchoninic Acid-Abbott—A brand of phenylcinchoninic acid, U. S. P. (see Uew and Nonofficial Remedies, 1918, p. 269). The Abbott Laboratories, Chicago.

Parresined Lace-Mesh Surgical Dressing—Net mesh gauze impregnated with and containing from 45 to 50 per cent of parresine (see New and Nonofficial Remedies, 1918, p. 247). The Abbott Laboratories, Chicago.

Halazone-Spibb—A brand of halazone complying with the standards for halazone, N. N. R. It is marketed only in the from of Tablets Halazone-Spuibb 1-16 grain, each containing halazone-Spuibb, 1-16 grain, anhydrous sodium carbonate, 1-16 grain, and sodium chloride, 1 ⅜ grains. Halazone tablets are used for the sterilization of drinking water one to two tablets being added to one quart of water. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Spet. 28, 1918 p. 1059).

Chlorcosane—A liquid, chlorinated paraffin, containing its chlorine in stable (non-active) combination. It is used as a solvent for dichloramine-T and is itself without therapeutic action.

Chlorcosane- Calco— A brand of chlorcosane containing from 31 to 35 per cent of combinned chlorine. The Calco Chemical Co., Bound Brook, N. J.

Chlorcosane- Monsanto— A brand of chlorcosane containing from 27 to 30 per cent of combined chlorine. Monsanto Chemical Co., St. Louis, Mo. (*Jour. A. M. A.*, May 18, 1918, p. 1459).

Propaganda for Reform

Malt Preparations in Infant Feeding—Malt Preparations have enjoyed popularity for some time in the feeding of infants. A familiar mixture is the so-called malt soup, the use of which was modified by Keller to include potassium carbonate. The assimilibility of maltose has been highly lauded, but the advantage over other carbohydrates has not been definitely proved. Maltose has been vaguely stated to be indicated in the constipation of infants and the retention of calcium facilitated by the use of Keller's formula. However, in experiments on animals it was not found that administration of a base like sodium carbonate produced any effect on the balance of calcium. It has also been reported that in a normal infant the addition of alkali to milk produced an unfavorable effect on calcium retention. Without addition of alkali, malt extract was found to act beneficially on calcium storage, but this is probably not due to the maltose. If malt soup has a favorable effect on calcium metabolism, it is not due to the alkali originally present or added to it. There is no reason at present to attribute the seemingly substantiated benefit from malt preparations on calcium storage to the maltose. (*Jour. A. M. A.*, March 1, 1919, p. 656).

Misbranded Nostrums—The following nostrums were declared misbranded under the federal Food and Drugs Act because of the false, fraudulent or misleading claims made for them: Alkavis; Sulferro-Sol; Gonorrhea and Gleet 3 Day Cure; Old Indian Fever Tonic; Pain-I-Cure; Walker's Dead Shot Colic Cure (*Jour. A. M. A.*, March 1, 1919, p. 670).

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ABDOMINAL DRAINAGE

By
Frank Le Moyne Hupp, M.D., F.A.C.S.,
Wheeling, W. Va.

Attending Surgeon Ohio Valley General Hospital.

Although the subject of drainage is an old one, there are still conflicting opinions as to when the peritoneum can be trusted to independently push back an invading foe from the abdominal salient.

There are those who will not hesitate to impose a heavy tax on this delicate membrane, and even in the face of greatly diminished body resistance, let the abdominal cavity do its own scavenger work.

The whole question is more or less dependant on the judgment and experience of the individual surgeon. Perhaps, after all, there has been ample justification for the cry against the promiscuous use of the iodoform tamponade of Briddon, the drain of Mikuliez, and the taxidermic methods of past years. But whether this radical anti-drainage teaching, with its far reaching influence, has yielded the best results, is open to discussion.

In the Mutter[1] Lectures on Selected Topics in Surgical Pathology, Rosewell Park, quoted by Charles K. Briddon[2] says: "Among all the defensive powers of the system, the capacity of resorption is, perhaps, the most important protection enjoyed by the cells and tissues composing the organism. This power seems to be enjoyed in the highest degree by the peritoneum, which is known sometimes to tolerate and dispose of relatively large amounts of infectious material."

Time and experience have not in the least detracted from this statement made nearly thirty years ago. Park or Briddon, masters of that day, did not wish to be understood as saying that, "the natural protection against invasion of cocci, was a warrant for the omission of any of the precautions that experience had proved to be useful." Indeed the influence and tendency has been quite in accord with this fundamental teaching. This great capacity of the peritoneum for resorption, and its power to put up a stiff defense, has led the present day surgeon to drain less and less.

WHEN TO DRAIN

The tendency to dispense with drainage following peritoneal infection has led Dr. Munro[3] to formulate three interesting factors to be considered:

"1. The individual equation as regards susceptibility to infection. This factor cannot be determined by any known reliable method of examination. Judgment that comes with experience counts for much in estimating its value.

2. The virulence of the infection. The species and the presence of the organism may be quickly and quite accurately determined by coverslip examinations. But this does not differentiate the virulence of the individual case.

3. The presence or absence of distinct foci of infection. This cannot always be determined with safety or accuracy at the time of operation. Consequently, if there is a reasonable doubt as to one of these factors we believe that some form of drainage is conservative."

POSTURE IN ABDOMINAL DRAINAGE

Posture has become a very important adjunct in the treatment of peritoneal sepsis, and in passing, it is with grateful appreciation that we pay tribute to the memory of the founder of Fowler's position. The basic principle was established, that the most active and rapid absorption into the lymphatics takes place from the diaphragmatic and omental peritoneum, while the pelvic peritoneum is very slow to absorb (Munro). The demonstration of this fact, led to Fowler's observation and the position which bears his name.

Hill[4] makes use of various positions in his abdominal work, to facilitate drainage, according to the location of the area of involved peritoneum. He employs the Fowler position, the prone or ventral decubitus and the lateral position. Certainly the position of the patient is an important factor in the recovery of the more severe cases of abdominal infection.

We wish to urge the importance of transporting a patient in the sitting position where a peritoneal sepsis is suspected. The writer has insisted on the observance of this step in bringing these patients from a distance to the hospital. Dr. Munro[5] emphasized this step several years ago and spoke of the cardiac weakness in patients of this class as being dependent on heart changes secondary to general septic absorption. If this toxemia is minimized, rather than increased by posture of the body, there is less to be feared as regards circulatory shock and collapse.

WAR WOUNDS OF THE ABDOMEN

[6]Regarding the drainage of war wounds of the abdomen, Sir Anthony Bowlby in his splendid paper, "The Development of British Surgery at the Front" just published under the supervision of The British Medical Association, says: "Abdominal drainage is most probably of little use except in local lesions." In speaking of the statistics in the present campaign, he reports an operative mortality of 50 per cent, and while such a report would be considered an awful death rate in civil practice, it was considered good under existing conditions. As a consequence of the first shock of war falling on a peace-loving and unprepared people, and waged in mud holes, polluted with the manure of centuries, before the crusade against the murderous Hun was six months on the way there began to be seen in the hospitals of France and England, infections of a kind and severity unknown to surgeons trained in the Listerian era. But how very different are the present day military and civilian problems in wound treatment.

Dr. C. L. Gibson[7] has said: "The treatment of war wounds is a highly specialized branch of surgery, and the rules of civil practice apply hardly, if at all, at the front.." The seriously injured factory hand will come, as a rule, from clean surroundings, he has been properly fed and clothed, he has not been unduly exposed to cold and wet, and his body is well rested when his injury is sustained. "The wounded soldier will probably have been subjected to harrassing conditions of warfare. His injuries may be multiple. It may be sometime before he is picked up, and in addition to the other conditions, he may have been deprived of food and drink, for a long period of time. The journey out of the trenches is long, tedious and hazardous and may greatly add to the patient's shock.. It is, therefore, obvious that special training for proper treatment of such cases must be obtained and must be derived from practical experience at the front and cannot be replaced by theory."

THE CARREL SYSTEM

The new faith, as taught by Carrel, whose weapon for wound disinfection has shown more weight than any other arm in offensive action, has led to the rewriting of some chapters on this subject of wound drainage.. We know, for instance, that the sterilization of septic pockets is quite easily accomplished by the omission of the counter opening in the dependant part of the wound, and by following the Carrel ritual, which is familiar to you all and means: "a combination of procedures, with surgical operation and mechanical cleansing by which a chemical substance is used under specific conditions of contact, concentration, time and under bacteriological control." We have repeatedly demonstrated that in some of these intra-abdominal, rotten abscess cavities, whether of appendix or tubal origin, one can see the charted microbic curve progressively fall to the zero line, when the installation tubes have been carefully placed and the technic of Carrel rigidly enforced. It should be emphasized right here that Carrel never intended his system of wound sterilization to take the place of early clean surgery or exteriorization of wounds, as Captain Wooler calls it, and the removal of all foreign material. Dr. Gibson has well said, that while chemical sterilization has become a most valuable adjuvant, it must not be regarded a substitute for good surgery.

GUNSHOT WOUNDS OF THE ABDOMEN

The subjoined report from a well directed ambulance somewhere in France[9] is interesting to us in this discussion, as both operators discourage the use of drainage in gunshot wounds of the abdomen. Of 64 abdominal wounds, mostly multiple, received in the reporter's ambulance, 22 died in a state of shock within a few hours, without operation; 20 others treated expectantly on account of the benign nature of the injuries, recovered. Forty cases received operation with 20 recoveries and 20 deaths. It was claimed that the season of the year seemed to have a particular effect, as there was a mortality of 60 per cent in the cold season, as compared with 40 per cent in the warm season. Fifteen of the 40 cases had a single abdominal wound, 25 had at least two, and the others varied from 4 to 20 wounds. Multiple wounds gave a mortality of 68 per cent as against 20 per cent for single wounds. Operation was performed whenever the pulse was perceptible.. The writers have entirely discontinued lavage of the peritoneum with ether, owing to the abrupt fall in pressure. Warm salt solution was used.. Drainage of the abdomen was not encouraged as the authors claimed it was

useless or even harmful, but occasionally the Douglas pouch was drained for from 24 to 48 hours.

ABUSE OF THE DRAINAGE TUBE

Hathaway[10] condemns the drainage tube and although his results are brilliant, his position will hardly be subscribed to without reservation, by the members of this Section. He believes that if surgeons will take their courage in both hands, and will not be frightened by a little infection, leaving it to be dealt with by the natural resistance of the tissues to infection, and will give up the use of drainage tubes, they will not only find their results very much better, but will find their outlook on surgery totally changed. All that is necessary is to put something into the tissues which will keep a "passage" open, but which does not leave an open "drain". If a passage is required to be kept open, Hathaway puts in a piece of soft folded rubber—for instance, in an appendix abscess. This allows pus to come away, but will not leave an open "drain" by which secondary infection of staphylococci, from the skin, or other organisms can gain entrance.

War surgery has taught what should be the two main principles of civil surgery. 1. Early and complete operation. 2. That secondary or mixed infection is worse than primary infection. While the tissues of the body can, if given a fair chance, deal with one infection only, if that infection becomes a mixed one by entrance of organisms from outside, then the last state is worse than the first. Applying his experience of modern war surgery Hathaway started sewing up ordinary staphylococcic abscesses of the subcutaneous tissues, after incision and wiping out with bipp, and found they healed by first intention.

Hathaway then went a step further. He saw a case of perforated gastric ulcer two hours after perforation, and operated within four hours. He sewed up the perforation and, as it was near the pylorus and tended to close it, did a gastroenterostomy. He mechanically cleansed the peritoneum of food, washed out with flavine, and sutured completely. The result was healing by first intention and an uninterrupted recovery, better than he had experienced with the use of a drainage tube. Then he had to treat a bad compound fracture of tibia and fibula with a large external and contused wound, in a boy who had been run over by a motor lorry. He excised well clear of all damaged tissues—wiped out with bipp, and so mechanically cleansed and closed the wound by primary suture. The result was healing by first intention without a trace of suppuration.

The next step forward was in a case of gonococcal peritonitis. The peritoneum was infected and the abdominal cavity contained a turbid fluid; he removed one fallopian tube full of thick gonococcal pus, cleansed the peritoneum mechanically, washed out with flavine, and closed without drainage. The result was uninterrupted recovery and healing by first intention.

We quote freely from the report of Hathaway's series of cases in the abuse of the drainage tube, hoping it will provoke the fullest discussion.

I believe it is yet to be proved that the closing of a septic abdomen without drainage, is an unqualified rational procedure. No matter how thoroughly a peritoneal toilet may be made, there often lurks behind myriads of colonies of pathologic organisms, which may overwhelm the resistance, paralyze the arm of defense, and change what has seemed, at the operating table, a victory into defeat.

DRAINAGE FOLLOWING THE PUS APPENDIX

Dr. John W. Keefe,[11] in his excellent paper on Abdominal Drainage, has asked the question: "Where shall we make our incision for removal of the appendix?" The right rectus incision undoubtedly offers a better abdominal exploration in cases of chronic appendicitis, however, the possibility of a post-operative hernia must be considered where drainage becomes necessary. It should be remembered that this incision presents other disadvantages in that it is not always directly over the offending organ, and as Dr. Kelly has pointed out, drainage thus may become difficult. After all, many things must influence the choice of incision, the location of the pain, and some definite conception of the pathology, based on the clinical picture, and the laboratory findings. The subject of drainage in a case of appendicitis can not be definitely decided until the abdomen is opened. In acute appendicitis when the question of drainage is always to be considered, the writer has almost invariably preferred the McBurney "gridiron" incision; recognizing with Dr. Keefe that it is least likely to be followed by a hernia, and through this incision adequate drainage can usually be obtained. We have never had the least trouble by sufficiently enlarging this incision, in exploring the pelvic basin, where this step seemed safe and necessary.

While we cannot subscribe to all that has been written by Dr. J. W. Long[12] of North Carolina, it is interesting to record his experience in a series of 39 cases of acute appendicitis, some of them of the gangrenous type.. He closed the abdomen in each of them, and his results were gratifying in 37 of the series.

Dr. Howard A. Kelly[13] writes: "An appendiceal abscess should never be disinfected and closed without drainage. When there has been much pus, a large opening ought to be left for free drainage; but before the drain is inserted, the relations of the abscess must be studied, and pressure made upon it in various directions, in order to ascertain that there is not some other cavity communicating with the primary one."

Most of us have followed the teaching of Dr. John B. Deaver, where the culdesac is suspected of harboring pus, by introducing a catheter and aspirating with a syringe.

Dr. Kelly definitely lays down essential points to be remembered:

"The drain is only a drain to a limited extent and for a short time; it acts chiefly as a protective pack.

"It is essential that the whole septic area should be drained.

"The drain must be loose in order that it may absorb rapidly. It must never be firmly packed.

The drain must have exit through a large orifice.

Whenever possible, the drain must be to an orifice in a dependant position. The drain must be watched, and as soon as it ceases to discharge it must be loosened or wholly withdrawn.

In a small abscess it is sometimes best to leave the drain in for a week. Fatal infection has occurred from removing it too soon and thus breaking up protective adhesions."

Although Dr. Kelly's words were written thirteen years ago, I am convinced that this teaching may be safely followed today. Where there has been a general peritoneal infection, or in cases requiring temporary drainage, we have frequently seen the happiest results from a supra-pubic or loin stab wound drainage.

We prefer the split rubber tube, wrapped with gauze and covered with rubber dam, or the rubber dam and gauze

wrapped or rolled cirgarette fashion, judiciously placed at the bottom of the septic pit, or flanking definitely the seat of infection. When the drainage passes only to the fascia we have used the ordinary rubber band. The writer is indebted to Frank S. Mathews, of New York, for this simple, yet efficient, means of draining small pockets.

Whatever material used, we should always remember the fact pointed out by Godfrey and emphasized by Keefe, that a drain is efficacious only in proportion to the area of a transverse section at the point of obstruction. A point we wish to emphasize here is the imperative importance of the surgeon, or a skilled and trustworthy assistant, following up the mechanism of all abdominal drains. The writer, more than once, has seen a tragedy due to a cigarette drain blocking the passage of septic material. with the inevitable retention, overwhelming toxemia,, and death.

Remember, in using the drainage tube as the central core of the cigarette, or as an individual drain, care must be exercised in the selection of a perfectly pliable, yet non-collapsable pure rubber. We have known of perforation of the intestine or some large blood vessel, due to pressure of an unyielding hose pipe tube of the fishtail cut.

Many of us who served our interneship in the early nineties, can bear testimony to the faithful performance of the large glass tube, aspirating syringe and soft catheter used in the pus abdomen. The writer published several years ago a series of seven gun shot and stab wounds of the abdomen, each with visceral perforation; the glass tube was used in each of these cases with recovery, without hernia or secondary infection. Notwithstanding the large glass tube has been relegated to the junk of seldom used armamentaria, we think that there is still a place for it in selected cases.

Rutherford Morrison[14] regards the toughened glass tube of Keith the best form of drainage in pelvic sepsis.

Howard A. Kelly[15] says, the drainage ought never to be omitted in the pelvic abscess and is best carried out by means of rubber tubes a centimetre in diameter.

It was the writer's privilege, many years ago, as an interne in Presbyterian Hospital, New York, to assist in an operation and have the after-care of a case of Dr. Charles K. Briddon's:[16] A neglected pyosalpinx, with firm old adhesions In the course of extirpation there was a complete transverse rupture of the rectum, necessitating the formation of a temporary artificial anus. A secondary operation was performed for reconstruction of the rectum, from which the patient recovered with complete control of function.

In this classical case, as in all of the graver forms of pelvic suppuration, Dr. Briddon used the intra-peritoneal iodoform tampon. To facilitate the removal of the gauze, it was the custom of this operator to pass one or more glass tubes down to the bottom of the cavity and to pack loosely around these a liberal amount of washed iodoform gauze.

With regard to these graver forms of pyosalpinx, we will all accept without reserve the teaching of that great English gynecologist Lawton Tait. Whether we drain or not, certainly his words ring as true today as they did thirty years ago. In an address delivered to the French Surgical Congress in 1891, Tait said:

"I am quite certain now that in the hands of a competent operator there are no adhesions of the uterine appendages which cannot be overcome, and no case ought to be left unfinished. Incomplete

operations are the approbrium of abdominal surgery, and operators ought to be more discredited by them than by anything else."

Dr. J. Y. Brown,[17] of St. Louis, in a recent essay, remarkable for its philosophic grasp, is of the opinion that the outcome of these pus tube cases depends largely on the proper application of the drain. After the enucleation which is usually extensive, the euldesac is left denuded..

Joseph Price long ago emphasized the value of the coffer dam drain and Coffey of Oregon, later elaborated on the technic of applying this drain. After the removal of the diseased tubes, and the completion of the pelvic toilet, with the patient in the Trendelenberg position, the intestines are lifted from the culdesac. Gauze tape about 36 inches in length is now placed from right to left, filling the culdesac and covering all raw areas. The end of the gauze is then brought out at the lower angle of the wound, and slipped through a very thin rubber tube. Brown is confident that this type of drain will prevent post-operative ileus.. He pays a generous and well-deserved tribute to the genius of the late Joseph Price, when he says: "To him more than to any one man in America, is due the credit of having placed pelvic surgery on a sound and substantial basis."

DRAINAGE IN TUBERCULOUS PERITONITIS

We have been definitely taught and this teaching has been strengthened by experience, that the peritoneal cavity, when the seat of an unmixed tuberculous infection, should never be drained. The explanation has been found in an etiologic factor, which has been clearly explained by Dr. W. J. Mayo,[18] who has called tuberculous peritonitis a symptom and not a primary disease, arising secondarily to a local lesion, usually in the Fallopian tubes or the intestinal tract, or from retroperitoneal glands. The abdominal ostia of the Fallopian tubes in tuberculosis are usually open, while in gonnorhoea, Murphy has taught, they are nearly always closed. The infective tuberculous material from the tubes passes with freedom through the fimbrial into the peritoneal cavity, and as pointed out by Dr. Mayo, the resulting reaction with accumulation of ascetic fluid we speak of as tuberculous peritonitis. The real explanation of the exceptional recoveries of these patients following abdominal section and drainage, is, that the fimbriated mouths are closed by adhesions, or by becoming attached to some neighboring part of the peritoneum. But the tragedy comes too often following incision and drainage; the mixed infection, the fecal fistula, the hectic with its "picket fence temperature," and the fatal exhaustion. Dr. Mayo therefore concludes:

"1. Those afflicted with tuberculosis do not die of the disease, but from the associated sepsis. 2. Drainage of the abdomen should never be used in tuberculosis of the peritoneum. 3. Pure products of tuberculosis in the pelvis should be removed, wherever possible, by clean, careful operation."

The writer has only attempted to touch the fringe of some of the important phases of this drainage problem.

We do not wish to be understood as making a plea for any particular form of drainage in a purulent peritonitis, but humbly present a simple chronicle of facts, opinions and observations from the hospital wards.

This whole subject of drainage presents certain definite scientific principles, which must be applied with judgment to each individual case. Dr. Draper has said that mere technic is easy,

the modern surgeon must be more than a mere craftsman. Get hold of the principles, therefore, and do not follow with dogmatic blindness an unvarying ritual in every pus abdomen which you may lead to the operating table.

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MEDICAL PROGRESS

By C. O. HENRY, M.D., Fairmont, W. Va.

Read before the Harrison County Medical Society.

Thirty-seven years ago this month, at Grafton, it was my great pleasure to join what was then called the West Virginia Medical Society, with Dr. B. W. Allen, of the West Virginia University medical department, retiring president in the chair, and Dr. A. F. Gerstell of Piedmont, elected to succeed him.

The attendance at this meeting was small, not over thirty or forty from different parts of the state, and only one from this city, twenty-two miles away, and one from my present home, the same distance away. What they lacked in membership on the roll, and attendance at the annual meetings, was made up in zeal, for those that nursed and nourished the weakling, saw far into the future, that it was, as it has been, a great factor in shaping laws that would raise the profession to a higher standard, and safeguard the health of the citizens of the state.

One great handicap to the organization was the opposition on the part of those who prastised the healing art, but had never seen a medical college, and knew nothing about scientific medicine, but as the state developed her natural resources, new fields were opened, new men came in to occupy the territory, and best of all, along about 1881 this nucleus of zealous physicians began to get in their work, when they persuaded the legislature to pass a law creating a state board of health and registration, and from that day to the present, the law has been strengthened to such an extent, that today we have on our statute books, one of the best medical practice laws of any state in the union.

The growth of the West Virginia Medical Association dates from the day of making the county society the unit. In its scope and usefulness, it compares very favorably in its relation to the A. M. A., as our county and state to the National Government, and in the many things it has accomplished, goes to prove what unity of action, and oneness of purpose can do. Every profession in the state,

every industry and business is organized to protect their interests, and not being satisfied with individual organization, they have correlated all in what is called the Rotary Club.

The Surgeon General of the Army, Navy and Public Health Service, have not found it derogatory to their best interest, or standing in society, to be members in their county, state and national organization, and it has always been a quandary in my mind, how any physician, licensed to practice medicine in West Virginia, should stand aloof from his county society. I know objection to what I have asserted will not meet the approbation of many, but the argument is made, it is much easier to reform a recalcitrant in the fold, than one on the outside.

As Secretary of my home society, I have invited every man in the profession to join our ranks, and why not? When there is not a man in the county that I would not meet in consultation, or refuse on the other hand were he requested.

Through the National, State and County organizations, a more brotherly feeling exists among the profession than was ever before known in its history, and we are getting away from that foreign autocracy, where, unless the man following the healing art is bedecked by the Crown, he is nothing but a prebeian. We shed the blood of some of our best young men to make the world safe for democracy, let's make our organization a haven for all who seek to enter. It is quite prevalent for some members to knock the society because some member has overstepped the bounds of propriety, this is unkind to an institution that is unable to defend itself, but rather ponder well the true saying, "Let him that is without fault cast the first stone."

Never in history did the medical profession organized as it is, show to better advantage than at the breaking out of the war with Germany. One of the first steps taken was to organize the medical men for service in the army, and as a natural result, the A. M. A. association was called upon by the Government to lend its aid, as they well knew, that this organization knew the medical men who would give a good account of themselves, and to A. M. A.'s credit, it can be said no medical man was accepted for any important work in the service without their O. K.

We all have a certain pride, especially those of us who had passed the age of acceptance for active service in the Medical Corps, of what our fellow practitioner did, and what he sacrificed.

It was my good fortune to be in Washington in May, 1918, to attend a meeting of the V. M. S. C., when a message was received from the President, praising the medical men for the unselfish part they were taking, and as another evidence of our importance in the great struggle, it was said the soldier, when he went into battle, cared not if all the officers were gone, so long as the doctor was there, for then he felt sure if he were wounded, there was one present who would give him care, and relieve his suffering. I could go on and recount many heroic acts on the part of our professional men, for we know from the number who sacrificed their lives, that they were no slackers.

We are accused of rejecting anything that does not originate in our ranks, but I am inclined to doubt the assertion, for it has ever been the rule of the profession to accept anything that would aid in relieving distress, or surgical appliance that would aid the crippled or deformed, and in view of what I have just said, I want to recount an instance of the kind. It was in a crowded hospital back of Verdun during the historic siege.

Never was gathered a ghastlier group of maimed, charred and mangled living bodies than haunted the operating room that morning. Surgeons, hardened by long service paled at the sight of some of the cases, and the one layman present—a young American—almost wished he had never done anything to bring him there, despite the mercy of his errand. The attendants wheeled forward a closely swathed figure, half upright in a chair—a victim of liquid fire. One who was present describes what followed: The head was almost entirely enveloped in gauze. One hand and arm had been burned black, and they, too, were partly covered with white bandages. But there was worse.

The victim had been struck in the chest by the fluid, and the result surpassed Dantes' imaginings. A sheet of gauze eighteen inches square covered a burn on the body that stretched from neck to navel. The outlines of the gaping hole wherein the flesh had been burned away showed through the stuff, which in places was stuck to the flesh beneath. What one could see of the face—black, spotted with flaming red holes, gray where the flesh had been reduced to a cinder—shocked the spectators almost to nausea. For, out from beneath this frightful ruin stared two living eyes.

Within that roasted heap of flesh life stirred sluggishly; suffering had been so great, shock so unsettling, that the man was reduced to a half-bestial organism, capable of no sensation save pain. In a dozen places large nerves were exposed. The doctors had not dared to put the patient to bed when he arrived the day before. When brought into the operating room he sat propped up on cushions, heedless of everything but the pain that was slowly driving consciousness from that devastated dwelling.

"What can you do with a case like that, Monsieur Edwards?" asked the chief surgeon of the horrified American. "That breast must be dressed or the man will die of poisoning, yet, with the nerves exposed as they are, if I attempt to remove that apron of gauze, he will die of pain. Can you do anything for him?"

"I'll try," answered the layman, and aiming a nozzle of a pressure jet, he sprayed the gauze for ten minutes, then beckoned to a nurse, and tenderly she began to peel down the gauze, the patient did not move, the great surgeon doubted his eyes, reached over and stripped off the bandage with a single sweep.

Not a sigh from the mutilated man, he had felt nothing, but by the grace of this new anesthetic called "nickalgin"—Greek for victory over pain—death had been defeated in a case where such a thing had seemed impossible. And Gordon Edwards, who for two years had been laughed at, sneered at, hindered and condemned as a "patent medicine" faker by the medical men of England and France, found himself suddenly called upon to supply more of this remarkable solution than he had ever dreamed of making. It was to be used in all the military hospitals in France; it was adopted by the English and Italians, it was to revolutionize the dressing of wounds in a manner as marked as the "Carrel-Dakin" solution.

The story behind this achievement is that of a Minnesota youth graduated from Stanford University fourteen years ago, who, upon hearing some doctors lamenting the lack of a perfect dental anaesthetic, stirred him to study and experiment, resulting in what he thought was a solution of the problem. Of course, the profession shied at it, to begin with he was an outsider, and as a result, he became very much discouraged—the war came on, which meant pain and suffering—he spoke to some medical men about

the need for a local anaesthetic—"some thing that can be sprayed on a raw surface without danger, such as attends the use of cocaine." He was told that perfect anaesthesia could only be brought about by injection producing pressure on the nerves, he wondered how this could be brought about on a raw surface as broad as his two hands, so he modified his solution so it could be sprayed on, with the result as before stated.

When he went to Europe he received the cold shoulder, he did not want to sell it, but wanted to give it as his war contribution, no one would take it. In 1916, at a time when he was very much discouraged, he met Miss Annie Morgan, the daughter of the great financier, told her of his new discovery, and the opposition he had met, and it was through her that General Neville gave him permission to take his nickalgin to the Verdun hospital.

With the financial help of this fine young woman, he was enabled to furnish hundreds of gallons of his solution to the war hospitals, and thousands of men, who today are alive and useful, owe their lives to this American, still in his thirties and destined to stand among the prime benefactors of the race.

It is but right that we should uphold the dignity of the profession, guard and protect the achievements of our medical men, but at the same time we should not be so superscillious that we would disdain to lay hold of other discoveries that would aid suffering humanity.

We want to draw another picture that the awful war brought to our notice: In the last decade the scientific men of Germany turned their attention to the invention of means to utterly destroy any who might brook their arrogance, and villiany, and when they met to correlate their achievements, and drank to the toast of "der tag," some doe-bellied professor would rise in his seat and announce he had discovered the remedy that would "strafe" England, and wipe France and America off the map; but how different was it with our scientific men, and those of our allies, they sought means and remedies that would save men's lives, viz., Carrel-Dakin solution, nickalgin and antiseptic wax covering for burns and sloughing wounds.

It has been said that medicine and surgery in four years has advanced half a century, the use of some combination of chlorine in surgery, for the destruction of malignant germs, there is no excuse for the presence of pus. What has been accomplished in the way of reconstruction of maimed soldiers, is so clever that it will take an expert to tell where nature left off and man began.

In conclusion, honor to those of our brave boys in conjunction with those of our allies, who gave up their lives on the frozen steppes of Siberia, the plains of Mesopotamia, the hills of Judea, and those who sleep in France and Italy, who have died that we might be free from the blighting hand of autocracy.

GALL-STONE DISEASE COMPLICATING PREGNANCY.

AIME PAUL HEINECK, M.D., Chicago, Ill.

A careful analysis of the reported cases of cholelithiasis complicating pregnancy, taken in conjunction with my clinical experience in analogous cases, justifies, I believe, the following conclusions:

1. Gallstone disease occurs with far greater frequency in women than in men; with far greater frequency in women that have borne children than in women that have remained sterile. Its period of greatest incidence is the childbearing period.

2. Gallstone disease, alone or associated with one or more other related or non-related pathological states, not uncommonly complicates a pregnancy otherwise normal or abnormal.

3. The first manifestations of cholelithiasis may date from the existing gestation or from a previous pregnancy; may precede, coincide with, or follow an absorption of premature labor, accidental or induced.

4. All conditions that are associated with, that favor or cause, *a,* bile stasis; *b*, inflammatory or degenerative changes involving the gall-bladder or bile tracts; *c*, pathological alterations in the composition of the bile, such as hypercholesterinaemia, etc., predispose to gallstone disease.

5. Bacterial organisms are said to be the most essential cause in the majority of cases of gallstones. In this connection one should not ignore the relation of mouth and teeth infections to appendicitis and cholecystitis.

6. Pregnancy is an important etiological factor in the causation of cholelithiasis.

7. The pathology of gall-stone disease complicating pregnancy is the pathology of gallstone disease occurring in the non-pregnant. There may be present: *a*, an inflammation of the gall-bladder or bile ducts in which one, two, or many calculi are lodged, or impacted; *b*, a distention of the gall-bladder or bile ducts by mucus, pus, or calculi; *c*, a pericholecystic inflammation, calculous in origin, leading to adhesion formation, to fistula formation, etc., and corresponding disturbances of function; *d*, changes in the liver; *e*, changes in the pancreas.

8. Stones may precede the presence of inflammatory changes in the gall-bladder, may be associated with and be the cause or effect of cholecystic inflammation, slight, moderate, or severe.

9. Some of the symptoms of gall-stone disease are due to the irritation inherent to the presence of gall-stones, to their migration through, or impaction in the bile ducts or neck of the gall- bladder. Other symptoms are due to the concomitant inflammation of the gall-bladder, bile ducts and neighboring organs, causative of, or resulting from the presence of calculi.

10. Rupture of a gall-bladder distended by calculi, mucous, or purulent in nature, can occur during gestation or during or immediately after labor.

11. To arrive at an accurate diagnosis, it is important to have: 1, an exact history, including the record of previous attacks of hepatic colic; 2, to determine the location of the pain and tenderness and the nature and radiating character of the former; 3, to make a thorough examination, including a careful inspection and palpation of the abdomen, especially of the hypochondriac region; 4, to exclude such pathological conditions as simulate gall-stone disease—lead colic, renal colic, duodenal ulcer, nephrolithiasis, chronic appendicitis, movable kidney, infection of the genital tract.

12. In the differential diagnosis of this condition, one should bear in mind:

a. That not infrequently gallstone disease originates during or may complicate pregnancy:

b. That cholelithiasis and cholecystitis owing to their reflex symptoms are often mistaken for gastric disease;

c. That appendicitis and gallstone disease frequently co-exist;

d. That digestive disturbances associated with acute pain and tenderness in the right hypochondriac region with or without jaundice, with or without symptoms of biliary colic are in themselves ample justification for operative exploration of the gall-bladder and ducts.

13. Cholelithiasis is a surgical disease; it calls for operative relief. Medicinal measures in this disease are merely palliative; appropriate surgical measures are curative.

14. Gallstone disease is in itself never an indication for the artificial termination of pregnancy.

15. Whenever, for some cause or other, the abdomen is opened, in women of the child-bearing age or past the child-bearing period, the gall-bladder and larger bile ducts should be examined if it can be done: *a,* without or with only slight traumatizing of the tissues; *b,* without exposing the patient to too much additional risk; *c,* without contaminating clean peritoneum. Should the patient give a history of chronic digestive disturbances the indication is absolute.

16. Women exposed to pregnancy, suffering from calculous cholecystitis or any other form of gallstone disease, should be operated, the calculi removed, and the gall-bladder drained.

17. Pregnancy does not contra-indicate operations upon the gall-bladder or bile tracts. Peterson reported only three miscarriages in 23 reported operated cases. In only one (Roith) of the cases which we considered, did abortion follow the operation.

18. It has been repeatedly demonstrated that the operative relief and cure of cholelithiasis does not unfavorably influence gestation, does not unfavorably influence parturition. Icterus, whether acute or chronic, is a constant menace to the foetus.

19. Early operation is now, in proper hands, a safe procedure. It is an effectual cure of the symptoms produced by gallstones; it has a low mortality and guarantees against serious complications in the future.

20. Cholecystostomy, cholecystectomy, and choledochotomy have been successfully performed upon pregnant women for the relief of gallstones. After these operations, drainage is to be employed until the bile ceases to flow spontaneously through the wound, until complete subsidence of whatever degree of cholangitis existed.

21. Cholecystostomy is the operation of election:

a. Whenever the patient's condition is so bad that the difficulties attending a cholecystectomy render its performance unsafe;

b. When the gall-bladder is not seriously damaged and when the cystic duct is not ulcerated or narrowed by stricture. It is believed that the gall-bladder has some other function than that of a mere receptacle of bile.

c. When the common duct is strictured;

d. If jaundice and pancreatitis be present.

22. Cholecystectomy is indicated:

a. For very thick, acutely inflamed, or gangrenous gall-bladders in which a stone is impacted in the cystocdduct;

b. For chronically thickened gall-bladder. A thick wall gall-bladder which has become functionless should always be removed. When the gall-bladder becomes thickened and hardened from long continued inflammation, it is manifestly impossible that it should dilate no matter what obstruction there may be in the common duct;

c. For large gall-bladders distended with clear fluid and resulting from the impaction of a stone in the cystic duct;

d. For the "strawberry" gall-bladder (chronic thickening with ulceration);

e. For a calculous gall-bladder adherent to the stomach, intestine, or omentum.

f. When the walls of the gall-bladder

are so modified by disease that neither the storage nor the expulsion of bile is possible.

23. It is agreed that cholecystectomy is attended with more technical difficulties than cholecystostomy. It requires greater care to avoid injury to the bowels, vessels and the main bile ducts. It is wiser to choose the safer operation until the technic of the more complicated one has been mastered.

24. The prognosis of operative intervention is not unfavorably influenced by the existence of pregnancy.

25. In persistent gall-bladder disease, trouble changes in the urine manifested by the presence of casts and albumen are not uncommon and are not necessarily a bar to operative interference.

ENCEPHALITIS LETHARGICA.

By WALTER E. VEST, A.M., M.D., Major M.R.C., Huntington, W. Va.

Read at Annual Meeting, West Virginia Medical Association, Clarksburg, May 21, 1919.

Whether the title we have chosen is the name which medical science will finally fasten upon the widespread epidemic of so-called "sleeping sickness" remains to be seen. We cannot agree with Bassoe that the term "Nona" the name given to the epidemic of 1890, even if it is short and non-committal, "should, perhaps, be revived." The newspapers have so popularized "sleeping sickness" that the laity will always designate it thus. It is probable, however, that either "Epidemic Encaphalitis," proposed by Bassoe, or the designation used in our title, first suggested by Economo, we believe, will finally be adopted by the profession. Neither seems to be open to serious legitimate criticism.

This condition, which is probably identical with the acute hemorrhagic encephalitis, described by Leichtenstein in 1890, is characterized clinically, by fever, more or less irregular in type, marked lethargy and cranial nerve paralysis. The palsy seems especially likely to be ocular, hence double vision is common. Drooping of the upper lids is a conspicuous symptom. Very similar epidemics are reported in the medical literature of the past two centuries, and the fact that they have always been closely associated with—usually immediately following—epidemics of the acute respiratory disease commonly called influenza, would seem to indicate that there is an etiological relationship between the two conditions.

Perhaps, after all, "epidemic encephalitis" is only influenza with the chief lesion in the cranial cavity rather than in the chest cavity. Cases were reported in Europe in 1917. Gradually from the eastern portion of that war-wracked continent the disease spread westward. The first reported case definitely diagnosed in America, was seen at Camp Lee by Major Pothier, October 23, 1918. About the same time, Ely of Des Moines, noted a case. Several others were seen later at Camp Lee. The earliest case in Chicago, reported in Bassoe's series, was noted December 27, 1918. The first appearance at Camp Wadsworth was St. Valentine's Day. This paper represents an effort to analyze the findings in twenty-five cases which have been studied and reported fairly completely. Of these Major Pothier reports eight, Ely two, and Bassoe twelve in his excellent study of the Chicago epidemic. To these, I am adding three which appear to be fairly typical.

PATHOLOGY

Probably too few autopsies on these cases have been reported to justify defin-

ite and absolute descriptions of the pathology. Bassoe's two necropsies are very clearly described, and from him we quote: "The gross changes consist of edema, congestion and minute hemorrhages, most numerous in the brain stem, basal ganglia and centrum ovale. The histologic changes consist principally of dense accumulations of mononuclear cells around the vessels and of small hemorrhages." Marinesco believes the microscopic changes are inflammatory in nature. At any rate, the essential macroscopic lesion seems to be hemorrhages, minute in size, although Church and Peterson make the statement that they are at times massive. Histologically, in addition to the hemorrhages, the perivascular cellular infiltration, mononuclear type, is the striking feature. The motor cranial nerve nuclei only are involved, not the sensory.

SYMPTOMATOLOGY

The manifestations are very varied as is shown by a symptom-analysis based on the twenty-five case histories studied in the preparation of this paper. Fever is the commonest symptom, having been definitely present in twenty-three cases, with the record incomplete in the other two; a known percentage of 92. Lethargy, the second most frequent finding, was present in 18 cases, or 72 per cent of the total. Based on the two commonest symptoms then, we might just as properly call the disease "sleepy fever" as "sleeping sickness." Fifteen had double vision, and two others blurring of images. Paralysis or visible weakness of the muscles of the face was present in twelve cases, while vertigo was recorded in eleven. Of eight fundus examinations, only one presented an abnormality, a unilateral blurred disc. There was definite constipation in eight cases, and drooping of the upper eyelids was as frequent. Rapid pulse was common, the rate being above 100 in seven out of eleven instances, in which it is definitely reported. Neuralgic pains were fairly frequent seven instances being noted. Delirium, stiff extremities, dysphagia, and rigidity of the back muscles were each present six times. It is probable too, that the "lead pipe" phenomenon, noted by Ely in two cases, is the same condition as is nominated rigidity by other observers. Photophobia, headache, difficult speech and choreiform movements were equally present, each being noted five times. Irregularity of the pupils was seen in four instances while nystagmus was recorded as often. Four were nauseated, two of whom vomited. Stiffness of the jaws was noted three times. Four cases were ushered in with pharyngitis and one with rhinitis. Three were recorded as unable to whistle. Two had limb paralyses. Two had morning somnolence, but in another case the lethargy was most marked in the afternoon. Markedly coated tongue was thrice noted. One, a colored man, had a voracious appetite. Labial herpes was present once and an irregular pulse once. One patient had hemorragic blisters on the heels. Sensation was uniformly normal.

LABORATORY FINDINGS

The blood findings are usually negative. Of twenty total white counts the highest was 16,400 and the lowest 4,400. But three were above 10.000 and only two below 7,000. The average was slightly above 8,400. The highest polymorphonuclear percentage was 74 and the lowest 45, with an average of 69. The remainder of the differential count varied in no way from the normal. The Wasserman reaction was one plus in two instances. The blood pressure was normal whenever recorded. No blood cultures showed a growth.

The urinalyses were uniformly normal except that in one instance a moderate amount of albumin was found and in another acetone.

The spinal fluid was uniformly clear. The cell counts varied from 4 to 85 with an average of 24. In some instances a moderate percentage of polynuclear cells was found. Thus it seems that we are justified in believing that moderate pleocytosis is a common finding. Globulin was one plus in eight cases and negative in ten. Of eight sugar determinations, only one was found negative. The fluid Wasserman test was uniformly negative.

ETIOLOGY

Lethargic encephalitis is no respecter of persons, ages, or sexes. In this series, the youngest was 6 and the eldest 62. Two were in the first decade of life; three in the second; seven in the third; seven in the fourth; five in the fifth. Then we ship the sixth and find one in the seventh. Fourteen were male and eleven female. Of the fifteen from civil life, females were twice as commonly affected as males. In the Army cases, naturally males, are largely in the majority, only one female case being reported, that of a nurse. There is a preceding history of a definite attack of influenza in seven cases only. However, the writer observed, either at the bedside, or the post-mortem table, in unquestioned cases of influenza, hemorrhage from the nose, bronchi, lungs, beneath the pleura, into the lung tissue, the pleural cavity, both recti muscles, and the muscles of the back, with one case of probable gastric hemorrhage. With hemorrhage the essential pathology of "sleeping sickness" then it does not require a very great stretch of the imagination to consider this condition encephalic influenza. In Europe, Von Weissner has recovered a grain-positive diplo-streptococcus which he believed to be the cause, but others do not confirm his work. All efforts in America to isolate a definite etiological micro-organism, so far reported, have been fruitless.

PROGNOSIS

The newspapers to the contrary notwithstanding, the prognosis is not always grave. Of this series of cases, six died, a mortality rate of 24%. Usually the facial palsy and the lethargy persist considerably longer than the fever, and often set in as the fever begins to decline. The weakness following may last a month or two.

TREATMENT

Rest in bed should be insisted upon until all danger is past, especially in those cases with a rapid pulse. Liquid diet should be given during the febrile state with thereafter a gradual return to solids. Water should be given freely and the bowels kept well open. Scopolamine is the best drug for delirium and violent choreiform movements. Morphine is contraindicated because it promotes somnolence; increases cerebral congestion; depresses the respiratory center, and promotes the excessive accumulation of CO2 in the blood stream. The therapeutic measure of most value is spinal puncture. This procedure, and the withdrawal of a reasonable amount of fluid, relieves the lethargy and lessens any increased intracranial pressure. Besides it is often a diagnostic necessity as a matter of excluding cerebrospinal meningitis. When carefully done spinal puncture is practically free from danger, and we would advise it as a routine in all cases with marked somnolence, rigidity of the neck and spine, and, as a diagnostic measure, when for any reason meningitis cannot be definitely excluded.

CASE REPORTS

Case 1. The patient, female, member of the A. N. C., age 41, single, white, nativity Virginian, service one year and three months, was admitted to Base Hospital, Camp Wadsworth, February 14, 1919.

Family history negative. Personal history negative except for occasional swelling of ankles and voiding once a night.

About the middle of January had a mild attack of acute bronchitis and has had slight cough and expectoration since. Day preceding admission had an attack of pain in left shoulder and side. Very drowsy since. By the 15th, pain was present in face, most marked on right, and there was some twitching of facial muscles. Some pain in right eye, with diplopia.

General Examination: Very nervous; photophobia; partial drooping of upper eyelids, most marked on left. Diplopia. Breath foul; odor slightly urinous. Tongue somewhat coated. Lips chafed. Slightly tender on pressure at angle of left jaw. Choreiform movements of head and neck. Speech somewhat thickened. Throat shows slight pharyngitis. Lungs negative except for an occasional rale in right base and in left chest near cardiac apex. Abdomen negative. No dermographia. Kernig negative. Blood pressure 115-75.

Clinical Examinations: Urinalysis negative except for s.g. of 1035 and presence of acetone. Blood: Red cells, 4,070,000; white cells, 10,000; small mononuclears 16; large mononuclears 10; transitionals 1; polymorphonuclears 72; basophiles 1; Wasserman negative; radiograph of chest negative.

Ocular Examination: Pupils equal and react normally. Photophobia and blurring of images, more pronounced at distance. Fundi normal. Tension normal. Upper lids drooping. Palsy of left external rectus.

Progress: General condition continued same for several days except that nausea and vomiting was present on the night of the 17th. Somnolence continued most marked in the forenoon. By the 22nd, patient was better, but convalescence was slow. Diplopia persisted until March 1, and blurred images for two weeks longer. Temperature was irregular until the 23rd, never going above 101.8 and in a. m. was generally normal. After the 23rd, temperature was normal. Pulse was low during febrile period, never registering above 104. The acetone was present on only one urinalysis. Recovery was apparently complete. Spinal puncture was not done out of deference of the patient's wishes and because it was not considered absolutely necessary from a therapeutic standpoint.

Case 2. A private, Co. D, 422 R. L. Bn., age 29, black, nativity, S. C., service 7-12 years, was admitted to Base Hospital, Camp Wadsworth, March 1, 1919.

Family history negative. Past history: Waiter in cafe, usual diseases of childhood, gonorrhea in 1918. No casualties.

Present illness: Began March 1, 1919, with slight pain in upper abdomen; then in head and eyes. Vision became disturbed, diplopia being present. Roaring in ears, slight, was complained of. On admission temperature was 101.6.

General examination: Weight 185 pounds. Looks well. Some mental confusion. Pupils equal and react well to light. Slight tenderness behind right ear. Breath foul. Tongue coated. Throat somewhat reddened. No retraction of head. No stiffness of neck. Lungs negative. Heart negative. Abdomen shows no evidence of disease. No glandular enlargement. Tendon reflex-

es normal except that knee jerks are possibly a trifl sluggish. Kernig negative. Babinski negative.

Clinical examinations: Blood: Malaria negative. White cells, 9,800; small mononuclears 8; large mononuclears 28; transitionals 1; polymorphonuclears 63; W. R. negative. Urine: Amber, clear, acid; S. G. 1028; albumin negative; sugar negative. Microscopic examination negative except for a few epithelial cells, an occasional leucocyte, and uric acid crystals. Spinal fluid: No evidence of increased pressure: Sugar negative: globulin negative: W. R. negative. Total and differential cell count not done because of contamination with red blood cells. X-ray of chest negative.

Progress: Right ear and mastoid considered negative by otologist. By March 6th, patient had become very somnolent, especially in the forenoon. Right pupil on that day was slightly irregular, but reaction to light was fairly good. Speech "stumbling" in character with elision of syllables. Tongue coated white. Complains of feeling weak in legs. Is correctly oriented. Is very hungry. Nervous twitching of facial muscles. Otherwise examination was as before except that possibly pulmonic second sound was more accentuated than aortic second. Considerable mental confusion was noted for the next three days. Mild delirium at times, especially just after being awakened. Temperature was irregular, ranging from 101.6 to 97.6, the last elevation being noted on the 15th. Pulse rate never over 100, and usually ranged between 70 and 90. Between the 15th and the 19th had considerable abdominal pain most marked to left of umbilicus. On March 19 had heavy labial herpes. By March 24, both of these conditions were clear and there was no further somnolence. Patient still complained of being weak in legs. Entirely clear mentally. Recovery apparently complete.

Case 3: Seen April 18, 1919, at Kenova, W. Va., in consultation with Dr. Benjamin D. Garrett. Patient was white, male, age 40, married, baggage handler, American.

Chief complaint: Somnolence and double vision.

Family history: Negative.

Past history: Always well except for a Neissarian infection fourteen years ago which lasted six months with no complications. No history of influenza prior to this illness. Has been irregular smoker but in recent months has not used tobacco in any form. Does not drink alcoholics. Has never been constipated. No history of night voiding. Appetite good. Has always slept well. For the past several months has had cramps in his hips at night. Drinks much water. No history of casualties. Has been working hard for the past six months.

Present illness: On April 4, felt badly and had generalized aching, especially marked in the head and the back of the neck. Took a purgative and felt relieved. Next morning, went to work as usual but was weak all that day. The succeeding day he felt fine and had no other symptoms until Tuesday night, when he had headache with severe backache, low down in lumbar region. Throat was not sore. When seen by Dr. Garrett the next morning, April 9, T. was 102, P. 120, R. 24. Had slight cough but has never had any expectoration and his cough cleared up after a day or two. On April 11, began to have double vision and complained that he saw two wives coming through the door instead of one. The next day he had an attack of pleurisy limited to the right side, pain for some time being very severe. By the 14th this was entirely relieved. Sleepiness

began on the 12th and somnolence was apparently no more marked in the morning than in the afternoon. Was very sleepy until the afternoon of the 17th, when he became very wide awake and remained so until two o'clock in the morning. Has had delusions, fanciful in type, since about the 14th, especially about money matters, and endorsing checks, and believes house is turned around. Thinks his friends are "framing up" on him. Photophobia began on the 17th. Ever since present illness began has been dizzy on attempting to rise. No trouble in swallowing. No drooling of saliva. Mouth has been dry. Delirium and carphologia began the 13th and have persisted up to the present. Was most marked the 15th. No conjunctivitis. No choreiform movements. Moderately constipated. Vomited on the third day of illness. No nose bleed. T. has been normal since the 14th, but pulse has continued somewhat accelerated. The first week ranged between 100 and 120. Has not been very irritable and when asleep was readily aroused. No appetite until the 17th.

Examination: Patient lies quietly with eyes closed but can be aroused without difficulty. Mentally clear this morning. Pupils react to light and accommodation and are equally round. Says photophobia is only an unpleasant sensation. No diplopia present now. No nystagmus. Eye lids droop. Tongue slightly coated and is protruded with a slight tremor. Breath foul. Whistles normally. No glandular enlargement. Throat and neck negative. No disturbance of sensation. Tendon reflexes normal. Knee jerks normal. Babinski normal. No ankle clonus. Cremasteric reflexes sluggish, the left being more responsive than the right. Abdominal reflexes normal. Right grasp 110. Left 108. Blood pressure; systoltic 110, diastalic 70. Heart examination shows a diffuse apex impulse. No murmurs. Maximum apex impulse in fifth intercostal space 7 c.m. out of mid-sternal line. Nipple 9.5 c.m. out. Pulmonic second sound louder than aortic second. Left lung normal. Right lung at base in the axillary region shows vocal fremitus increased. Percussion resonance impaired. Harsh breathing. No transmission of whispered voice. Transmission of spoken voice accentuated. Slight friction rub in right base. Abdominal examination negative.

Blood: Haemoglobin 90. Total white count 16,400. Differential shows Polymorphonuclears 74; small lymphocytes 18; large lymphocytes 1; transitionals 4; and myelocytes 3.

Urinalysis: Amber, clear, acid, 1032, albumin trace, sugar negative, indican trace. Microscopically a few leucocytes and an occasional granular cast are found.

Spinal puncture was not done because his condition was apparently clearing up satisfactorily. Improvement continued until about nine o'clock on the night of the 20th, when sudden collapse came on and death ensued in about ten minutes. Doctor Garrett reached him before death and is of the opinion that there was an acute dilation of the heart. While this view is probable, we are unable to exclude sudden massive hemorrhage. Patient had not been out of bed and had been kept quiet. Is is probable that the high blood count in this case was due to the chest complication. Autopsy was not secured.

Announcements and Communications

"My work, my work! I must go to my work!"

Unmindful of self even at the approach of death, Miss Jane A. Delano,

Director General of the American Red Cross Department of Nursing, displayed to the very end the spirit that ever dominated her life and these were the last words she murmured before lapsing into unconsciousness from which she did not emerge. Details of the last hours of the woman who mobilized the nursing strength of the nation for war service are revealed in a letter from Col. W. E. Cooper, Medical Corps U. S. A., commanding the hospital center at Saveney, France, where Miss Delano died, to Maj.-Gen. Merriette W. Ireland, Surgeon General of the Army.

"Knowing that you are especially interested in Miss Delano's case," wrote Col. Cooper, "I am sending directly to you a copy of her case history. It will seem in this history that she made a very remarkable fight for her life, and I think it is due a great deal to the remarkable personality and will power that she had.

"I really feel that everything possible was done for Miss Delano, and think that her case was quite exceptional in many ways. Everyone, I think, was especially interested in her and did everything possible that could have been done. It was thought at all of the operations that her case was practically hopeless, but she rallied each time, and her life was not despaired of until the last operation, when streptococus haemolyticus infection developed.

"Miss Stimson (chief nurse of the A. E. F.) was down from Tours, and several of the Red Cross representatives from Paris were here. We gave Miss Delano a military funeral, and had what I considered a very beautiful and fitting ceremony. There were about 350 nurses and attendants at the funeral, and probably one thousand people altogether were in the funeral procession. * *

"Miss Kerr arrived from Washington the same day that the last operation was performed, and Miss Delano, while very sick, recognized her and seemed very happy to see her. The last words of Miss Delano, before sinking into unconsciousness were, 'My work, my work! I must go to my work!' "

April 26, 1919.

Fifteen of America's leading health specialists, acting with the distinguished physicians and scientists of England, France, Japan and Italy, have affixed their names to a resolution of great import to the future welfare of mankind just adopted by the Inter-Allied Red Cross Conference in session at Cannes, France. The resolution, telling of the purpose "to spread the light of science and the warmth of human sympathy into every corner of the world, was adopted by the committee of Red Cross leaders which is preparing the program for world betterment to be submitted to the congress of Red Cross societies at Geneva thirty days after peace has been declared. The text of the resolution follows:

"We are assembled at the invitation of the Committee of Red Cross Societies to assist in the task for for which that committee was constituted, namely: 'To formulate and propose to the Red Cross Societies of the world an extended program of Red Cross activities in the interest of humanity.'

"In addressing ourselves to this task, we desire to express our belief that while every measure should be taken to repair the ravages of war and to prevent all wars, it is no less important that the world should address itself to the prevention and amelioration of those ever-present tragedies of unnecessary sickness and death which occur in the homes of all peoples.

"This world-wide prevalence of disease and suffering is in considerable measure due to causes which science has

not yet disclosed, but a great part of it is due to widespread ignorance and lack of application of well-established facts and methods capable either of largely restricting disease or of preventing it altogether.

"It is clear that it is most important to the future progress and security of civilization that intelligent steps be taken to instruct the peoples of the world in the observance of those principles and practices which will contribute to their health and welfare.

"In the accomplishment of these great aims it is of supreme consequence that the results of the studies and researches of science should be made available to the whole world; that high standards of practice and proficiency in the prevention of disease and preservation of health should be promoted and supported by an intelligent and educated public opinion; and that effective measures should be taken in every country to secure the utmost co-operation between the people at large and all well-directed agencies engaged in the promotion of health.

"We have carefully considered the general purposes of the committee of Red Cross Societies whereby it is proposed to utilize a central organization which shall stimulate and co-ordinate the voluntary efforts of the peoples of the world through their respective Red Cross societies; which shall assist in promoting the development of sound measures for public health and sanitation, the welfare of children and mothers, the education and training of nurses, the control of tuberculosis, venereal diseases, malaria and other infectious and preventable diseases, and which shall endeavor to spread the light of science and the warmth of human sympathy into every corner of the world, and shall invoke in behalf of the broadest humanity not alone the results of science, but the daily efforts of men and women of every country, every religion and every race.

"We believe that the plans now being developed should at the earliest practical moment be put into effect and placed at the disposal of the world. In no way can this be done so effectively as through the agency of the Red Cross, hitherto largely representing a movement for ameliorating the conditions of war, but now surrounded by a new sentiment and the wide support and confidence of the peoples of the world and equipping it to promote effective measures for human betterment under conditions of peace.

"We are confident that this movement assured as it is at the outset of the moral support of civilization, has in it great possibilities of adding immeasurably to the happiness and welfare of mankind."

The following are the American scientists who have subscribed their names to the resolution: Dr. Wm. Welch, Dr. Wm. Palmer Lucas, Lt.-Col. Wm. F. Snow, Dr. Hugh S. Cumming, Dr. Samuel McClintock Hamill, Dr. Herman Michael Biggs, Dr. Fritz B. Talbot, Col. Richard P. Strong, Dr. L. Emmett Holt, Dr. Wycliffe Rose, Dr. Frederick F. Russell, Dr. Edward R. Baldwin, Dr. Livingston Farrand, Lt.-Col. Lindsley R. Williams and Dr. Albert H. Garvin.

Scientists of the four other great powers who have signed the resolution are: Great Britain: Lt.-Col. Edward G. Hort, Lt.-Col. Sir R. W. Philip, Col. S. L. Cummins, Dr. Henry Kenwood, Sir John Lumsden, Dr. F. Truby King, Col. L. W. Harrison, Sir Arthur Newsholme, Dr. F. N. Cayay Menzies.

Italy: Dr. Ettore Marcha Fava, Prof. Edcarde Maragliano, Dr. Barthalameo Gosie, Lt.-Col. Aldo Castellani, Dr. Francesco Valagussa, Dr. Camille Colgi, Col. Caesar Baduel, Dr. Camille Poli, Dr. Giuseppi Bastianelli.

France: Dr. Paul Emile Roux, Dr. Edouard Rist, Dr. P. Armand DeLille.
Japan: Dr. T. Kabeshima.

Ed. W. Va. Med. Jour.,
Huntington, W. Va.

Dear Sir:—For the information of the present and prospective health officers of the State, will you kindly print the following resolutions which were adopted by the Publi· Health Council at its meeting in Parkersburg on April 23.

Respectfully yours,
S. L. JEPSON,
State Health Commr.

RESOLUTIONS

That any physician who has been convicted of failure to report cases of infectious or contagious disease to the local health officer shall be deemed guilty of dishonorable conduct, and may, at the discretion of the Public Health Council, have his license revoked.

That any health officer who fails to investigate any case of infectious or communicable disease reported to him by any physician, within twenty-four hours after receipt of the report, shall be deemed guilty of neglect of duty, and upon conviction thereof by the Public Health Council, shall be removed from office.

The failure on the part of any health officer to make to the State Health Department the weekly report of infectious disease as required by law shall be deemed guilty of a violation of the law, and such officer guilty of such violation may, at the discretion of the Public Health Council, be removed from office.

Any municipal or county health officer who neglects to prosecute any physician who fails to report infectious or communicable diseases as required by law, shall be deemed by the Public Health Council guilty of neglect of duty, and may, at the discretion of the council, be removed from office.

May 12, 1919.

Ed. W. Va. Med. Jour.,
Huntington, W. Va.

The Thirty-second Annual Convention of the American Association of Orificial Surgeons will be held September 15, 16, 17, at the Congress Hotel, Chicago. The forenoons will be given to operative demonstrations at the hospital.

The program will be replete with addresses, essays and papers by prominent Orificialists. The clinics will be interesting as usual.

September 15, 16, 17, Congress Hotel, Chicago.

Very truly yours,
PAUL C. GOODLOVE,
Sec.

"PROCAINE," A NEW FREE BOOKLET WHICH MAY BE HAD FOR THE ASKING.

"Procaine for Local Anesthesia in Surgery, the Specialties, and Operative Dentistry," is the title of a new booklet by Dr. F. H. McMechan, editor of the *American Yearbook of Anesthesia and Analgesia.* It is an editorial abstract of a series of articles on local anesthesia prepared by Dr. McMechan, and presents in simple, boiled down, yet detailed style, the advantages of procaine over other local anesthetics; the various solutions and combinations used and how to prepare them from marketed products; indications and contra-indications; and the technic for its use in spinal, sacral, venous, ophthalmic, rhinolaryngologic, and dental anesthesia. A number of excellent illustrations add to its value.

This booklet may be had *free* by any physician, hospital superintendent, surgeon or dentist sending his request to The Abbott Laboratories, 4757 Ravenswood Avenue, Chicago, Ill. Everyone who secures it will find it distinctly worth while.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., Editor
C. R. ENSLOW, M. D.
J. E. RADER, M. D. Assistant Editors

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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THE FIFTY-SECOND ANNUAL MEETING.

For fourteen years the annual meeting of our association has been the very greatest professional treat I have had to look forward to. This one held last month in Clarksburg was without a doubt the best one since I have been a member. You were all advised to be sure to come. It is a great regret to me that it was impossible for each member to attend. You would have returned home enthused. You would have realized just how "big" our West Virginia men are.

On every hand you heard expressions of wonder at the very high grade of the papers and discussions. One of our distinguished visitors said that he had attended a number of State Meetings, but that this was his first West Virginia one and he was amazed at the great enthusiasm of those in attendance and the evidences of hard and careful study on the part of essayists. That he did not realize that West Vigrinia was such a progressive state professionally. To a very few of us who get to read so much from the men of our association, this compliment was not news, we knew it, yet never has such an enthusiastic and earnest and thoughtful registration been present at one time.

President Reed and Secretary Anderson were certainly untiring in their efforts to arrange the program. To them and Dr. Ogden, Secretary of the Surgical Section, is due a vote of thanks for this meeting with its feast of good things. There was not a paper presented which was not either a contribution to medicine or a review of medical progress up to the present. Not one of the Osler 1898 edition.

Our hosts, the Harrison County Medical Society, gave us just such a welcome and made us feel at home as we knew they would. There was that same spirit of good fellowship which was there eleven years ago, when we met in Clarksburg. Their farewell to us was a sumptuous banquet on Thursday night. The ladies were invited and it was truly a fitting climax to the meeting.

All of us will feel strengthened for the year's work by having been present, and will look forward to the meeting at Parkersburg next year with great anticipation.

THE MEETING OF THE WEST VIRGINIA HOSPITAL ASSOCIATION

This meeting was arranged by the President, Dr. J. A. Guthrie, to be held the day before the convening of the Medical Association. It was a signally enthusiastic gathering. Many subjects were up for discussion. The ones bringing out the most discussion being the relationship of the hospitals and the rulings of the Workman's Compensation Commission and the education of students of nursing.

These discussions were at times rather earnest ones, heated if you please, but all in a sincere and honest spirit. It is to be regretted that all interested in hospitals throughout the state were not present. Much good was accomplished and if these meetings are always as well attended and determined to accomplish something as was this one we may expect great things in the future.

The papers will appear in the Journal.

MEDICINE IN THE NEW WORLD OF PEACE.

We have frequently emphasized the fact that medicine and those who practice it can never be the same after the war as before. We fully recognize that we are in the presence of a great social upheaval whose effect throughout the world will probably surpass even that momentous event known as the French Revolution. We can see only dimly whither we are tending, but it is at least evident that civilization is moving rapidly, whether down a steep place into the sea, or, as some believe, up into the heights of the Promised Land. In this movement the medical profession is to a degree caught in the sweep of forces beyond its control, but it is also to a large extent potent and responsible for the part it shall play in the new era dawning on us. Many individual physicians have been more or less completely. if temporarily, uprooted by mobilization for war, and the whole medical profession, like many other professions, has been jostled out of its stability and routine. It is a time to many for strenuous readjustment; it is also an unequaled opportunity for surveying the future of medicine and formulating plans for a rational development. One thing is certain, that no limited considerations of self-interest are going to satisfy either the bulk of medical practitioners or the public they serve. The practice of medicine will more than ever be regarded not merely as a means of earning a livelihood, but as an essential service to mankind.

It would not be desirable to consider here all the possibilities of change, even

could we envisage these possibilities. But there is at least one aspect of medicine that the future is very certain to bring still more into the foreground: This is the side of medicine that is concerned with the prevention of disease, the preservation of the public health. Like many truths that have become wearisome through reiteration, the doctrine that from the standpoint of the community the prevention of disease is more important than its cure has come to sound dully on our ears. It has been said so often that many of us feel that we have done something about it.. And yet every student of public health knows that hardly a beginning has been made in the application of our existing knowledge to the solution of public health problems. Available information is not utilized; suitable procedures are not carried out at all or are carried out wastefully and inefficiently; the opinion of the amateur or of the facile newspaper hygienist has as much weight with the public as the opinion of the expert.

These are all familiar conditions, but the medical profession has thus far failed to consider the situation serious enough. The creation and proper maintenance of a national department of health would undoubtedly help toward the more general recognition of the importance of preventive medicine, but at best this would be only preliminary. The real reform must be based on the training of a sufficiently large number of men in the principles of public health so that a body of educated, expert opinion in the medical profession will appreciate what can be done and what ought to be done, and will stand solidly back of attempts to introduce public health measures and to strengthen public health organization. Thus far, as everybody knows, little has been done to expand the work in preventive medicine in many of our leading medical schools to a degree at all commensurate with its importance in the future of American medicine.

The situation is simply this: Civilized peoples are spending vast sums in the work of palliating and remedying the results of disease, and relatively little in preventing disease. Reconstruction of ravaged territory is sometimes necessary, but a world with eyes fixed on a peace congress does not need to be told that our main concern is to choke off the agencies of devastation before they become operative. The responsibility of laying much more stress than heretofore on the prevention of disease rests primarily on the medical profession. There are at least two ways in which the conspicuousness into which the war has thrown this side of medicine can be immediately utilized in furthering the interests of public health: One is the support of public health authorities by individual physicians. The other is the frank, efficient and immediate recognition of the importance of preventive medicine in the curriculums of our medical schools.—*Jour. A. M. A.*, Jan. 25, 1919.

We take the following extracts from a paper by Dr. H. J. Haiselden, chief surgeon of the German-American Hospital, Chicago, which is published in the February *Journal of Homeopathy*, in which he expresses his belief that over 50,000 deaths in this country during the influenza epidemic were caused by "the asinine rulings of State Boards which prevented hospitals from admitting to their training schools young women who were thoroughly efficient." He says:

"*The best class of nurses come from young women who have had good home training, grammar school education, and who are from bread-winning families.* Nurses are frequently retained in training schools who are incompetent and un-

satisfactory, because they have had one year of high school education in compliance with the requirements of the State Board of Nurse Examiners. Daughters of thousands of mechanics have been rejected from the training schools because they have not been in a position to obtain the one year in high school, but otherwise qualify. Some are even advocating a four-year high school education as a preliminary requirement. * * * *It is dangerous to educate a nurse until she thinks she is equal to the physician in the diagnosing and treating of disease, but it is necessary for her to be so instructed that she can intelligently follow the instructions of the physician. A too highly educated nurse is educated above her work so that the mere thought of doing the so-called menial work in the nursing profession is abhorrent to her.*

A wounded soldier, covered with dirt and mud, must not be handled and prepared by the *super-nurse*, but that must be looked after by an inferior worker. When it comes to nursing in our war hospitals many of the orderlies who did nursing were men taken from the ranks, and they were not required to have a three-year training by any means before they were admitted to actual nursing in the hospitals, nor were they asked if they had a high school education."

The Journal referred to above also contains the following editorial under the heading, "The Impractical Super-Educated."

"One of the important lessons the world war has taught us is the fact that it does not require forty years to make a soldier nor as much time as formerly supposed to make a successful practical physician or nurse. Too long a period of incubation of the raw material often results in the loss of the natural initiative and the product is simply an automatic machine which was the fatal defect of the long-baked German soldier. It is a fact that can be easily verified that the recognized successful practical physician in general practice is not the super-educated man. The observation will hold good in the nursing field. Above all things the patient needs the really practical nurse."—*Jour. Med. Soc. of N. J.*, April, 1919.

State News

Dr. H. L. Kirkpatrick, who has been in California on quite an extensive vacation, passed through Huntington recently on his way to Deegans, W. Va.

Dr. Vernon L. Dyer, who has been assistant to Dr. C. F. Hicks in the Welch Hospital, has located in Petersburg for the practice of his profession.

Dr. Samuel R. Holroyd, superintendent of the State Hospital for Insane at Spencer, recently visited in Bluefield, Princeton and Athens.

Dr. C. H. Malcolm, who has been surgeon for the K. & M. Railroad with headquarters at Cedar Grove, has moved to Huntington and opened offices in the Homrich building.

Dr. A. C. Van Dyne, of Clay C. H., was recently elected Great Sachem of the council of West Virginia, Improved Order of Red Men.

Dr. F. L. Van Pelt, who recently returned from service in France, has located in Scarbro.

Dr. C. W. Waddell of Fairmont, of the State Board of Health, recently ad-

dressed the members of the Lumberport Woman's Club on the subject of "Rural Sanitation."

The Cincinnati Sanitarium has secured the services as resident clinical director, Egbert W. Fell, B.S., M.D., late Major M. C. U. S. A, and Chief of the Neuro-psychiatric section of the Walter Reed General Hospital, Washington, D. C.

Dr. C. A. Barlow formerly of Benwood, is still in the service, being located at Fort Des Moines, Iowa, Hospital No. 26.

Dr. J. O. Hicks of Huntington, who has been in the M. C. service with the rank of captain, and who has been stationed in a base hospital at Mentone, has returned home.

Dr. H. H. Haynes of Clarksburg, who was overseas for a year and a half, has returned to his practice in that city.

Dr. A. J. Swezey, specialist in eye, ear, nose and throat, recently located in Marietta,O ., has leased offices in the Robson-Prichard building, in Huntington, where he will practice his profession.

A copy of the October, 1916, issue of *The West Virginia Medical Journal* is requested. Send to the Editor.

The State Board for the Examination of Nurses, consisting of Dr. A. K. Kessler of Huntington, president; Dr. E. S. Bippus, Wheeling, treasurer; Miss Anna M. Trimble Huntington, secretary; Dr. C. M. Scott, Bluefield; Dr. G. M. Sites, Martinsburg; Dr. J. E. Cannaday, Charleston, held an examination at Huntington May 19. Eighty-one nurses took the examination.

The United States employes' compensation has designated Drs. J. R. Hunter, J. H. Steenbergen and C. R. Enslow to serve injured employes of the government in the Huntington district.

The Mount Hope Hospital at Huntington, has been leased for six years by Drs. J. E. Rader and C. T. Taylor, from Dr. R. E. Vickers. The signing of the contract for the hospital marks a new era of development in the old Huntington General Hospital. Facilities of the Mount Hope will be supplemented by those of the present Huntington General. One hundred and twenty-five beds will be available.

Confirmation of the report that a six-story fire-proof unit is to be added immediately to the plant of the Guthrie Hospital at Huntington is given by Dr. J. A. Guthrie, owner. The building will be 35 by 115 feet and will parallel the present plant at the corner of Sixth Avenue and Sixth Street. Plans are being prepared for the building now and these are to be ready in a few days. Ground will be broken as soon as possible.

The new unit of the Guthrie Hospital will contain one hundred beds. It is to have no physical connection with the present building.

Having practiced his profession for nearly half a century in Clarksburg, Dr. Fleming Howell of Oakland, Md., was a prominent visitor at the State Association. He came in response to a special invitation tendered him by the local medical society, and was the guest of Dr. T. M. Hood at a dinner at the latter's home. Dr. Howell is now retired. Both Dr. Howell and Dr. Hood are among the venerable physicians of the state, and

they recall the day when only about half a dozen doctors were practicing in Clarksburg.

Out of the state prominent visitors in attendance at the State Association meeting at Clarksburg were: Drs. Chas. A. L. Reed, Cincinnati, O.; H. S. Mustard, Washington, D. C.; B. Merrill Ricketts, Cincinnati, O.; Tom A. Williams, Washington, D. C.; Wm. S. Gardner, Baltimore; G. A. Hendon, Louisville, Ky., and Dr. and Mrs. Alexius McGlannan, Baltimore. Dr. Edward H. Richardson, also of Baltimore.

Dr. F. A. Fitch of Huntington, was a recent visitor in New York.

Medicine

QUININE ADMINISTRATION

Robert Howard (*Jour. of Tropical Medicine and Hygiene*, January 1, 1919) recommends, in the treatment of malaria, the use of the hydrochloride and bihydrochloride salts of quinine in preference to the sulphate and bisulphate. The hydrochloride contains much of the highest percentage of pure alkaloid among the quinine salts—81.5 per cent. —while the bihydrochloride, owing to its extreme solubility in water, is indicated for intramuscular or intravenous injection. In malaria prophylaxis he uses the hydrochloride either in tablet form or solution, in the latter case usually adding one minim of dilute hydrochloric acid to each grain of quinine, in order to convert it into the bihydrochloride. In definite malarial pyrexia he employs the bihydrochloride; this salt makes a tablet which is very soft and friable, and so soluble that even after administration as a tablet, tinnitus may be noted within an hour. In susceptible patients complaining much of tinnitus, the latter may sometimes be decreased by giving a few minims of dilute hydrobromic acid along with the quinine. Babies can be made to take quinine by putting some quinine tannate in the mouth and immediately giving the breast. As this salt contains only about thirty per cent of the alkaloid, the dose as ordinarily calculated must be at least doubled when it is used, a baby one year old thus receiving two to three grains at each dose. Pure quinine was also tried by the author, with some success. It is a damp, sticky powder, and is given in doses one-half or one-third those applying to the tannate. Further investigation of the use of pure quinine is required, particularly as regards its mode of absorption.

THE ADMINISTRATION OF NOVARSENOBENZOL PER RECTUM

Leo E. Grajewski (*Urological and Cutaneous Review*, January, 1919) describes the technic as follows: The night before the injection the patient is given a mild laxative, and on the following day takes one light meal, and the bowels are evacuated by a copious tepid irrigation. Then a pill of one centigram of opium is given to keep the bowel quiet so that the solution can be retained. The selected dose of the novarsenobenzol is dissolved in fifty c.c. of freshly distilled water, drawn up into a sterile glass syringe and injected into the rectal ampulla through a large calibre catheter. The dose for adults is .9 gram and for children .6 gram repeated every six days for six injections. If the Wassermann reaction is still positive the course is repeated and combined with mercury. The advantages of the rectal method are suppression of local and constitutional consequences; ease of application in the young; rapidity and simplicity of prep-

aration; rapid absorption, and equivalence of results.—*N. Y. Med. Jour.*, Feb. 8, 1919.

MAGNESIUM SULPHATE SOLUTIONS FOR BURNS.

In the course of a study of the action of magnesium sulphate on the nervous system Dr. S. J. Meltzer, of the department of physiology and pharmacology of the Rockefeller Institute for Medical Research, found that a concentrated solution of this salt had a very favorable effect as an application in scalds and burns. His original experiments, which are now published for the first time (*Journal of Pharmacology and Experimental Therapeutics,* November, 1918, p. 211), though made many years ago, showed that the ear of a rabbit which had been scalded by submersion in water at a temperature of 62.5° C. for two minutes was protected from serious injury by immersion in a twenty-five per cent solution of magnesium sulphate for three hours, though a little sloughing did occur at the tip. Subsequently this was tried in burns on human beings and it was found that burns of the second degree are invariably arrested in their development when a molecular solution of Epsom salt is applied early. As a rule burns of the third degree run a more favorable course under magnesium sulphate solution than under any other treatment. Solutions more concentrated than twenty-five per cent had an even better effect. The good results were not so noticeable in the advanced stages of burns on account of the infection usually present, but even then it had a favorable influence.

VAGABONDAGE AFTER THE WAR

It is a fact well known to students of sociology that following every great war of the past there has been an increase of vagabondage in the warring nations, nor is this one expected to be an exception. Psychology as it affects the individual and his life is very little known, after all. How many persons are thrown by destiny into foreordained paths and go from toys to school, from school to desk, and from desk to the grave with no possibility of kicking against the pricks unless it were by the exercise of a greater force of will than in them lies. They take the line of least resistance and follow the career mapped out for them. If they ever contemplate the delicious freedom from responsibility it is only with a passing sigh and no actual appreciation of its delights. The iron bonds of custom, convention, and conscience are too strong for them and they go down to the grave highly respected citizens. But the war has given them physical health, self-reliance, and a taste of freedom. The Wanderlust grips them, the open road of Bliss Carman, the long trail of Kipling, the little voices sung by service are calling them and they go forth into the open spaces. So we shall doubtless see as one of the many by-products of the war a rebellion against convention and civilization and an increase of society's Ishmaels.—*Medical Record.*

TREATMENT OF WEAK FEET

Leo C. Connelly (*Journal of Orthopedic Surgery,* April, 1919) encountered as many cases of weak feet during his examination at a local board, as he did during active military service in France. Most of the registrants with weak feet wore the so-called English walking shoe, a narrow toed shoe. The patient's feet were weak chiefly on account of their shoes, faulty standing posture and undeveloped foot muscles. The muscle pull of the foot flexors, foot extensors and foot supinators were taken each week.

The wearing of military shoes was advised and these were fitted according to the rules laid down by the Surgeon-General's office. The patients' feet were soaked in a solution of formaldehyde and given a foot powder containing boric acid and salicylic acid. The bromidrosis disappeared in about two weeks. Exercises were prescribed. All of the feet improved in muscle strength, and some arches were raised five-eighth inch. The same course was tried successfully with the older patients.—Clipping *N. Y. Med. Jour.*.

TREATMENT OF SCABIES IN PRIVATE PRACTICE.

C. G. Gumston (*Med. Record*) states that up to within a short time the treatment of scabies was complicated, but recently Oppenheim has published what he calls a rapid cure for scabies based on the treatment of 1,200 cases. It is carried out as follows: The entire body is rubbed for 15 minutes with green soap, after which the patient enters a warm bath and removes the soap with a brush. The process of removing the soap should last about one hour. The patient then comes out of the bath and dries the skin thoroughly, after which the following is applied:

R	Sulphur, praecip. . . .	25.
	Potassii carbonat. . . .	10.
	Vaselini	125.

Two hours later another warm bath is taken, the ointment is washed off, and after drying the skin, a zinc paste is applied. This completes the cure.

The author has employed the following treatment for the cure of scabies: The patient rubs green soap carefully all over the body to cover well the interdigital spaces of the hands and feet. A hot bath of one-half hour's duration is then taken, the soap being removed by mild friction. After the skin has been thoroughly dried the following ointment is rubbed in:

R	Ichthyol	10.
	Pommade of Helmerich .	80.
	Camphor trit.	2.

The pommade of Helmerich is composed as follows:

R	Sulphur. sublimat . . .	10.
	Potassii carbonat . . .	—.
	Aquae	aa 5.
	Ol. papaveris adipis . .	35.

This treatment can be easily carried out in any private house and cures the case rapidly without undue inflammatory reaction even in patients with delicate skins.

Surgery

PREVENTION OF POST-OPERATIVE THIRST.

By BERTHA VAN HOOSEN, M.D., Chicago. Head of Obstetrics, Loyala University.

Thirst following abdominal operations is often of so intense a character that the memory of it lingers in the patient's mind for many years. Every hospital has records of patients who have surreptitiously consumed the contents of a hot water bottle in an effort to quench the unendurable thirst from which they were suffering. Even when the surgeon has ordered water *ad libitum* or has installed the Murphy drip so a little water can be retained and absorbed after the patient has regained consciousness, that thirst is but slightly relieved.

This distressing thirst not only makes the patient wakeful and irritable and difficult to control, but it has an important physiological meaning as well, because it is the direct result of the anhydrous effect of the anesthetic upon the tissues, of the loss of blood and peritoneal fluid during operation and especial-

ly the depletion in the vascular system incident to preparation for operation.

Three years ago, in order to overcome these conditions a standing order was given in all my operative cases of a three-quart enema of tap water, temperature about 100° immediately following the operation, or as soon as the patient was returned to her bed. This enema was given fairly rapidly not more than ten or twenty minutes being required to introduce the entire three quarts. An ordinary colon tube was used and the water poured into the attached funnel. The patients, almost without an exception, retained the entire three quarts of tap water.

The fact that an enema of so much larger amount than usual can be retained at this particular time is largely dependent on the patient having had, preliminary to the anesthetic, either morphine and scopolamine or morphine and atrophine. In addition to this preliminary anodyne all of my patients who were given the three quarts of water by rectum, were also given morphine, one thirty-second grain, and scopolamine 1-200 grain every four hours during the first day and occasionally the second day following operation.

Many beneficial results from these large injections have been noted: Catheterization was rarely necessary. The secretion of urine was not accelerated during the first twelve hours, but after that it became very active, the patient often voiding every hour for a few times. Thirst was entirely relieved. Occasionally patients even refused water for twelve to fourteen hours following operation. Shock was prevented. The heart action was better sustained by the well-filled blood vessels. Gas pains were less frequent and annoying. Wounds healed more quickly and more firmly and resisted infection better due to the more normal condition of the circulation. The patient was well fortified to bear possible secondary hemorrhage or excessive loss of fluids due to prolonged or profuse vomiting. In pelvic operations the distended rectum gives the small intestine less opportunity to fall into the posterior cul de sac and become adherent. Albumen and casts more rarely appear in post-operative urine examinations.

Of the three quarts of water injected into the bowel the greater part was absorbed and never excreted by the bowel or kidney. Three day records of the intake of liquids and the loss by vomitus or urinary secretion showed that the patient retained permanently five pints of the water injected.

It is interesting to know something about the distribution of three quarts of water introduced in the large intestine too rapidly for immediate absorption. To determine this, three quarts of water were injected into the bowel after the completion of the operation and before the abdominal incision was closed. The abdomen was then explored and the following conditions found; rectum fully distended, sigmoid nearly empty, descending colon fully distended, transverse colon partly distended, and the ascending colon containing a small amount, as did the cecum. The small intestines were quite empty. Immediately following the closure of the abdomen two quarts more were injected into the bowel and the entire five quarts were retained by the patient with the usual good results.

For the benefit of any who may hesitate to use so large an enema it may be mentioned that at the present time my patients receive two quarts of tap water per rectum in the operating room during the closure of the abdomen and three per rectum as soon as they are returned to their beds, making in all five quarts of

water retained by the bowel. Since the introduction of the large (three to five quart) post-operative enema such orders as cracked ice, ice bags to the throat, sponging the face and hands at frequent intervals, applying wet gauze to the lips and tongue, and various other time consuming methods of combating thirst are not known in the surgical wards.. This simple measure has accomplished so much in making patients comfortable and relieving the work of the nurse, that it has seemed a worthy subject to bring to the attention of the surgeon.

PREGNANCY FOLLOWING HYSTERECTOMY.*

By WILLIAM F. GRIGG, M.D., Richmond, Virginia.

I report this case because it is a very unusual one. I did not attend the woman during her confinement, but I have her affidavit and that of the registered midwife who delivered her, and I have no grounds for doubt other than it seems almost impossible. The child has features very much like its parents. I have been unable to find anything in literature to support me in reporting this case.

Case No. 105. Female referred to me September, 1917, with a history of bleeding between her periods. On examination I found an enlarged boggy uterus with possible uterine fibroid and advised operation, which was done September 21, 1917..

Operation consisted of a median incision through which the uterus and both tubes were removed. Multiple fibroids of small size were found in body of uterus. All of the cervix and both ovaries (which were in good condition) were left in place. The patient made an uneventful recovery and was out of the hospital in thirteen days.

I kept her under observation for six months, after which time I lost sight of her until about Febuary 20, 1919, when I met her in the market and she told me she had a baby born to her December 30, 1918.. I told her it was impossible and went to her home the next day to see the baby. She swore it was her child. I then went to see the midwife who said the case was as near a normal delivery as she had ever seen. I told her that the mother had no womb. She said she did not know about that, but one thing she did know, and that was that she delivered her of the child, and was with her all during her labor.—*Va. Med. Monthly*, April, 1919.

WALKING AT ONCE AFTER REMOVAL OF MOVABLE BODIES IN THE KNEE.

Willems and de Caestecker now have a record of seventeen cases in which, after extirpation of movable bodies in the knee they insisted on the immediate use of the knee. They emphasize the absolute absence of injury from early mobilization which was a constant feature of their cases of war wounds of joints, and proved to be the same with these movable bodies. Some of the seventeen patients had considerable pain for a few hours or days and some had a little fever, but there was no infection and the mobilization of the knee was continued notwithstanding. If there was effusion, this was punctured without delay. No treatment was applied except actively moving the knee as soon as the patient roused from the anesthetic, keeping this up until he is walking around, which was usually by the third day, sometimes the second day. Several of the men returned in two weeks to their service at the front. This early functional use of the joint was not only superior to all other methods in the rapidity of the cure, but in the per-

fect functional and anatomic results attained. In their later cases they used local instead of general anesthesia for the operation, and they always work through a lateral vertical incision. They found several times more than one movable body, and hypertrophied fatty processes sometimes accompanied a dislocated meniscus. They warn that the mobilization must be active; passive movements are of no use. The joint should be flexed and stretched, as far as possbile each time, increasing the excursions, and keeping this up uninterruptedly, to the point of fatigue. Even the timid and cowardly can be persuaded to do this, but it is essential that some person must be by their side continually, reasoning with them, urging, coaxing, insisting, actually nagging them into keeping up the movements of the joint on which its future soundness depends. The result is proportional to the energy displayed by the persuading attendant and the patient himself. The mobilization is not actually painful, in the true sense of the word, even in severely infected cases. In conclusion they remark that a movable body, displaced meniscus or enlarged fatty process may be the true cause of certain chronic and recurring effusions in the joint rebellious to ordinary treatment.

PROGNOSIS OF GALL-BLADDER INFECTIONS.

Gibbon believes that the mortality in gall-bladder infections depends very largely on whether or not a cholangeitis is present, and that a persistent jaundice accompanied by general symptoms of sepsis is of grave import and calls for prompt drainage through the gall-bladder or common duct, or both; that a patient having undoubted symptoms of gall-bladder infection should not be allowed to postpone operation until an acute exacerbation of the infection occurs; that even far-advanced and neglected cases of infection of the gall-bladder alone give good results following operation; that jaundice due to stone in the common duct in the absence of symptoms of sepsis is not necessarily a grave symptom if prompt operation is done; that the high mortality following operations occurs in the cases of long-standing gall-bladder symptoms with acute exacerbation of the infection and in cases of malignancy of the gall-bladder and pancreas; that the use of horse serum has practically eliminated the danger of hemorrhage due to long-standing jaundice, and that the recurrence of gall-stones after thorough operation is extremely rare.

WOUNDS THAT DO NOT HEAL.

Milan analyzes the reasons why certain wounds drag along without healing. One of the principal reasons is the failure to recognize the cause preventing the healing. Syphilis may delay the consolidation of fractures and the healing of superficial wounds. Extra-genital soft chancre often fails of recognition. He gives an illustration of a case of giant soft chancres on the fingers and hand which had long been futilely treated on a mistaken diagnosis. Wounds may be kept from healing, intentionally by the patient, and unintentionally by the surgeon's abuse of disinfectants. Every hydrogen dioxid may be incriminated in this respect. The antiseptics which prevent or check healing may irritate the skin around, and this artificial dermatitis is far from exceptional, but is usually attributed to everything but the right cause. To prevent intentional irritation of the wound, the simplest means is to apply a large roller dressing and draw straight lines with ink down the front and sides with numerous crossbars. Any

attempt to unwind the dressing is betrayed at once by the irregularity of these lines afterward.

GANGRENE OF LUNG HEALS UNDER INDUCED PNEUMOTHORAX.

De Verbizier and Loiseleur witnessed the development of a focus of gangrene in the lung a week after the onset of grave influenza with involvement of the right lung. The resulting cavity was partially drained into the bronchus, but not adequately, and the general condition was growing graver. The roentgen days showed the clear outlines of the gangrenous cavity, and by inducing artificial pneumothorax this compressed the lung so effectually that the contents of the cavity were squeezed out. The walls of the cavity were thus pressed together, and definite healing soon followed. They state that in fifteen days the rays showed integral restitution of the parenchyma of the lung. During the interval, the 200 c.c. of air that had been injected were completely absorbed and the diaphragm was functioning clinically normally. Success with this technic naturally depends on the possibility of an effectual pneumothorax and on the cavity draining into one of the larger bronchi. It would be dangerous to compress a gangrenous focus connecting merely with one of the smaller bronchioles.

A NEW INCISION FOR APPENDECTOMY.

LEIGH F. WATSON, M.D., Chicago.

The number of incisions that have been brought forward for appendectomy from time to time, show that no one incision is adapted to all cases. Many writers have noted that in the cadaver the base of the appendix is found at McBurney's point, while in the living subject it is below this point, usually on a level with the center of Poupart's ligament. A number of operators have called attention to the ease with which the appendix can be removed when operating for right inguinal hernia. Since 1910, I have used a new incision, with its center over the base of the appendix, and believe that in many cases it is an improvement over those in general use.

Incision: A point one and one-half inches from the right anterior superior spine, on a level with a line connecting the two superior spines, is selected for the beginning of a vertical incision which extends directly downward for two to three inches to a point just above, and to the inner side of the internal abdominal ring.

Advantages: Traction to expose the appendix is avoided, because this incision, in the external oblique and its aponeurosis, the most resistant structures, is directly over the base of the appendix. It can be enlarged without weakening the abdominal wall. The ilio-hypogastric and ilio-inguinal nerves are not injured because the incision lies between them. Because this incision is made over the cecum, the small intestines do not crowd into the wound as they do when the McBurney and lateral rectus incisions are used.—*Annals of Surgery,* Oct., 1918, Vol. lxviii. No. 4, p. 397.

Book Reviews

The Philadelphia and Southern numbers of *Medical Clinics of North America* are well up to the general high quality of their publication. We are especially impressed by the articles on the late epidemic of influenza with its many varied complications and sequelae, by such men as Stengel, Landis, Deaver, Rosenberger, Burr, Case, Davis, and Ostheimer, in the Philadelphia number.

In the Southern number the clinics of Dr. Minor, in which the technique and management of artificial Pneumothorax in its application for the arrest or cure of pulmonary tuberculosis; Dr. Bass on Malaria, and Dr. Deaderick's contribution on the treatment of the same, are well worth the price of the numbers. We can unhesitatingly commend the clinics to all who may be interested in these and other subjects of practical importance to the practitioner.

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS.

Diseases of the Chest and the Principles of Physical Diagnosis, by George W. Norris, M.D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, M.D., Assistant Professor of Medicine in the University of Pennsylvania, with a chapter on the Electro-cardiograph in Heart Disease, by Edward B. Krumbharr, Ph. D., M. D.., Assistant Professor of Research Medicine in the University of Pennsylvania. Octavo volume of 782 pages with 413 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, $7 net; half morocco, $8.50 net.

This should be a much sought after text book. The information contained is evidently the result of careful observation, wide experience and deep study. The text is illustrated by numerous diagrams, cuts and photographs of frozen sections which serve to make the meaning plain. The discussion on the subject of diagnostic acoustics is given a great deal of space in order that the results of auscultation and percussion may be more correctly interpreted. The older practitioners will observe a very considerable change of late date, comparatively speaking, in these interpretations. Over one hundred pages are given in part IV to diseases of the pericardium, heart and aorta. A close study of the contents of this book will amply repay both the student and general practitioner for the outlay of time.

A MANUAL OF DISEASES OF THE NOSE, THROAT, AND EAR.

Fourth Edition, Thoroughly Revised.

A Manual of Diseases of the Nose, Throat and Ear, by E. B. Gleason, M.D., Professor of Otology in the Medico-Chirurgical College Graduate School, University of Pennsylvania. Fourth Edition, thoroughly revised. 12mo of 616 pages, 212 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, $3.00 net.

This is a book well designed for the use of the student and general practitioner. This fourth edition brings it as near up to date as can conveniently be done in manual or text book.. It is largely concerned with the medical treatment of the condition under consideration. Many of the important and most frequently demanded surgical procedures are also concisely described. A considerable amount of new matter has been added and conflicting views as to treatment omitted, giving the only well-tried and most generally adopted. A large number of formulae generally used and found to be of practical use is printed in the back of the book. There is evidence that in the absence of the proofreader the "devil" has held sway, but the usefulness of the book has not been impaired.

PRINCIPLES OF HYGIENE.

For students, physicians and health officers. By D. H.. Bergey, M.D., Assistant Professor of Hygiene and Bacteriology, University of Pennsylvania. Sixth edition thoroughly revised. Octavo of 543 pages, illustrated. Philadelphia and

London: W. B. Saunders Company, 1918. Cloth, $3.50 net.

This book of Dr. Bergey's is not claimed to be an exhaustive treatise on the principles of hygiene, but the fact that it has so quickly reached a sixth edition is an indisputable indication of its merits and appreciation by the medical profession. It deals in a very interesting way with these subjects of greatest importance to those for whom it has been prepared. After a short introductory chapter it takes up in order the following subjects: Air, Ventilation, Heating, Water and Water Supply. Removal and disposal of sewage, garbage disposal, Food and Dieting, Exercise, Clothing, Personal Hygiene, Industrial Hygiene, School Hygiene, Military Hygiene, Naval Hygiene, Soil, Habitations, Vital Causes of Diseases, Disinfection, Quarantine and Vital Statistics, with an appendix containing information for convenience of conversion of weights, measures, temperatures, scales, etc., from one method or unit of value to another, making an altogether very useful and reliable treatise for the use of students, practitioners, health officers and others connected with the duties of communal sanitation.

A Practical Textbook of Infection, Immunity and Specific Therapy, with special reference to Immunologic Technique, by John A. Kolmer, M.D., Dr. P. H., M. Sc. Assistant Professor of Experimental Pathology, University of Pennsylvania; Professor of Pathology and Bacteriology, Philadelphia Polytechnic and Pathologist to the department of Dermatologic Research; Pathologist to the Philadelphia Hospital for Contagious Disease. Second edition, thoroughly revised. W. B. Saunders Company, Philadelphia and London.

This is certainly a very valuable and interesting book from the standpoint of our present knowledge of infection and immunity as well as the specific therapy advocated. The rapid advance of our knowledge along these lines, while still leaving the subject in a somewhat chaotic state, with difference of opinion existing, renders the desirability of frequent revision an undisputed fact, this volume we think, may be accepted as an exemplification of all our best known and most generally accepted views.

Part first is devoted to general Immunology Technique. Part second to principles of infection as to its relation to infection and immunity, and the use of serums and vaccines in the prophylaxis and treatment of disease.

The chapter on Chemotherapy is of very great practical value to the practitioner in the use of salvarsan and neosalvarsan, the most approved method of administration, after effects, reaction, and manipulation indicated, early and late in the treatment of syphilis. Thirty-five pages are devoted to the subject of anaphylaxis.

This old new subject is one of the very greatest importance on account of its practical bearing on serum therapy. As far back as 1798 Jenner observed some of the indications of this condition, since which time many persons have made more or less exhaustive research and study of the various phenomena of anaphylaxis up to the present time. This volume contains a condensed statement of the various theories advanced and of our present knowledge of the condition always so puzzling and ofttimes so appalling in its results. Every student as well as practitioner should acquaint himself with the importance of this subject and carefully search out, contemplate and study the obscure cause or causes of infection and immunity. In this book is found a valuable guide and adviser.

Propaganda for Reform

PHARMACEUTICAL MANUFACTURERS AND "PRIVATE FORMULA" PRODUCTS.

Sharp and Dohme explain that it is their inflexible rule that all "private formula" orders intended for public distribution are refused until the copy for the literature has been studied by their experts. They explain that an order for three preparations which were later the subject of prosecution for misbranding under the Federal Food and Drugs Act were filled and shipped in the belief that the copy had been passed on by their Spanish expert, when in reality, this had not been done. The house of Sharp and Dohme feels that it has been done an injustice in the publication of the "misbranded nostrum" notices which gave no hint that the preparations were private formula products, and were not sold under the name of Sharp and Dohme. The firm believes that an injustice was done in that the references to these misbranded nostrums will lead readers to believe that they were sold under the label of Sharp and Dohme. There is unfortunately a commercial distinction between products which are made by a firm and products which are sold by it. Whether or not there is any moral difference between profiting by the manufacture of a "patent medicine," that is to be retailed by some one else, and selling the same medicine under one's own name, is a question.—*Jour. A. M. A.*, March 1, 1919, p. 669.

SACCHARIN—AFTER THE WAR.

Having satisfied a need during the sugar shortage, the manufacturers of Saccharin appear not to be content to turn their talents and plants to better uses, but suggest that the great commercial sacrifices made in setting their works into operation to produce Saccharin should be rewarded by permission to continue the traffic under post-war conditions. The referee board to which the Saccharin question was referred in this country, has by no means given a clean bill of health to the chemical, and the people need to be protected from the danger, or at least the deception, of a substitute for sugar which is in no sense a true food.—*Jour. A. M. A.*, March 8, 1919, p. 729.

DEPILAGIENE.

The A. M. A. Chemical Laboratory reports that "Franco-American Hygienic Depilagiene," a hair remover, essentially is a mixture of barium sulphate, barium sulphid, sulphur and starch. The amount of barium sulphid was found to be 222.6 per cent.. The is equivalent to about 45 per cent of commercial barium sulphid. Depilagiene has no claim to originality, as practically all chemical hair removers are composed of some form of sulphid. Naturally, the preparation is likely to cause more or less irritation of the skin.—*Jour. A. M. A.*, March 8, 1919, p. 746.

SODIUM VERSUS POTASSIUM

When the embargo was declared on Germany, the price of potassium salts in this country began to soar. Now steps are being taken for the production of potassium in this country. In the meantime the plentiful sodium salts may, in most cases, be used instead. There is no evidence that potassium salts are superior therapeutically to sodium salts, and they are very much cheaper. Sodium acetate, sodium bicarbonate, sodium bromid, sodium chlorate and sodium hydroxid are among the sodium salts which may with advantage replace the corresponding potassium salts.—*Jour. A. M. A.*, June 1, 1918, p. 1601.

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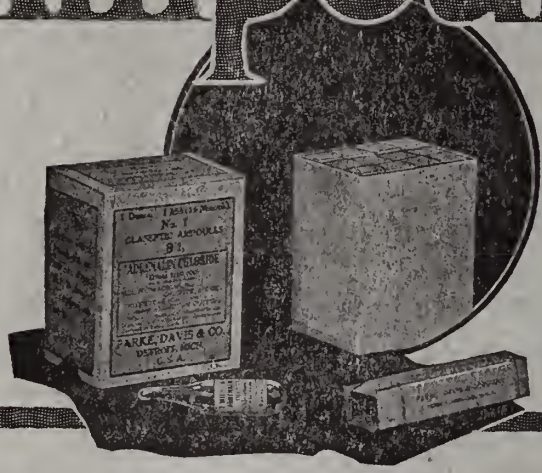

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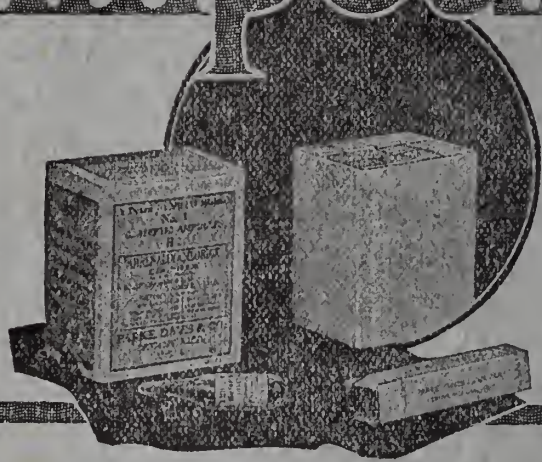

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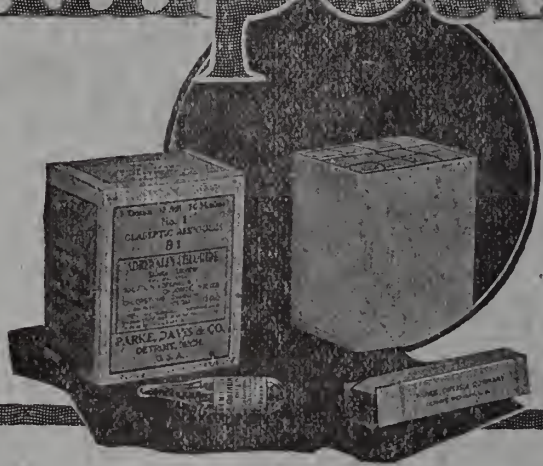

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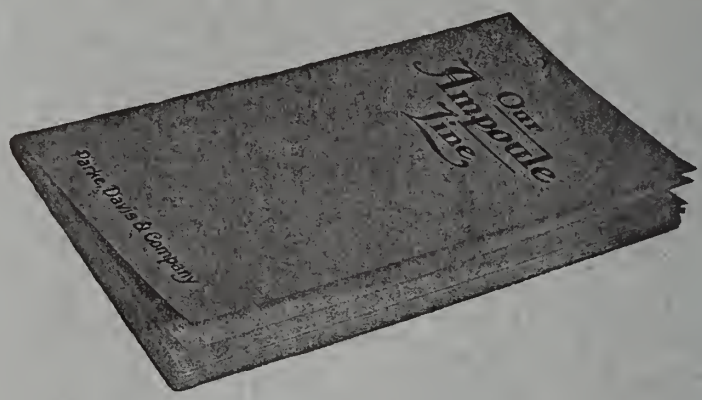

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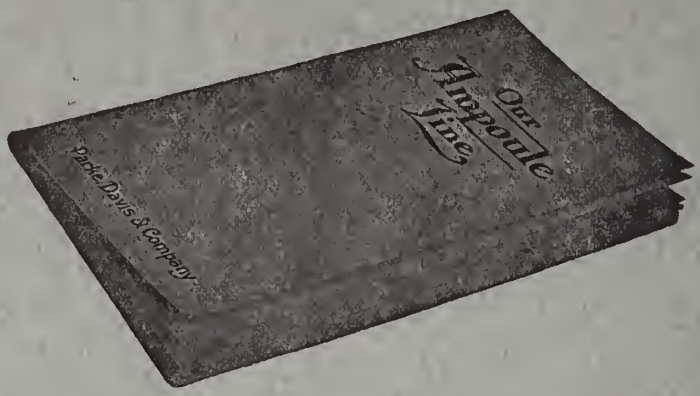

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